LogiSoft User Guide

Build 2446

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Getting Started

To get the most out of LogiSoft, it is important to have a clear strategy on how to use the system. There are many ways this can be done and the optimal solution depends on a number of things, such as which article types you intends to store, expected pick frequencies, who will be the users, future requirements etc. This article will review some of the considerations and preparations that should be made before starting up.

One issue is whether the warehouse is already in use or if you're starting with an empty warehouse. If the warehouse is in use, then there will naturally be a number of things, which cannot easily be changed, and it will be convenient to find a way to transfer the existing information to LogiSoft. I general, it is much easier to start with an empty warehouse without any restrictions.

In the following we will step by step show the basic configuration of a new system and discuss some of the considerations to make.

1. Start and Logon.
2. The warehouse is divided into *zones*.
3. Set up trays and shelves.
4. Set up *locations* to which the articles are to be put away.
5. Set up/load *master data,* for those articles which are to be put away.
6. Set up users.
7. Work groups must be set up.
8. Define labels, if necessary.
9. Establish an interface to a host system.

Start-up and log on

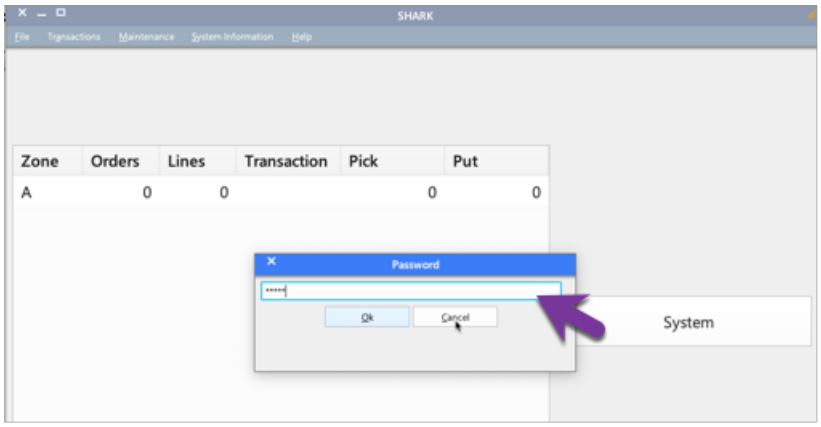
LogiSoft is normally started with the LogiSoft *icon* on the desk top or from the Start menu:

Start ? Programs ? LogiSoft

To use LogiSoft, you must *log on* to the system, this controls the user rights and logs actions taken by the logged in user.

After installation LogiSoft, there will be one "user" called "System" with the password "shark". The system user has the privileges to changes anything and should due to this be avoid for general use. This user name is entered the first time you log in. The system user may later be deleted or the password changed.

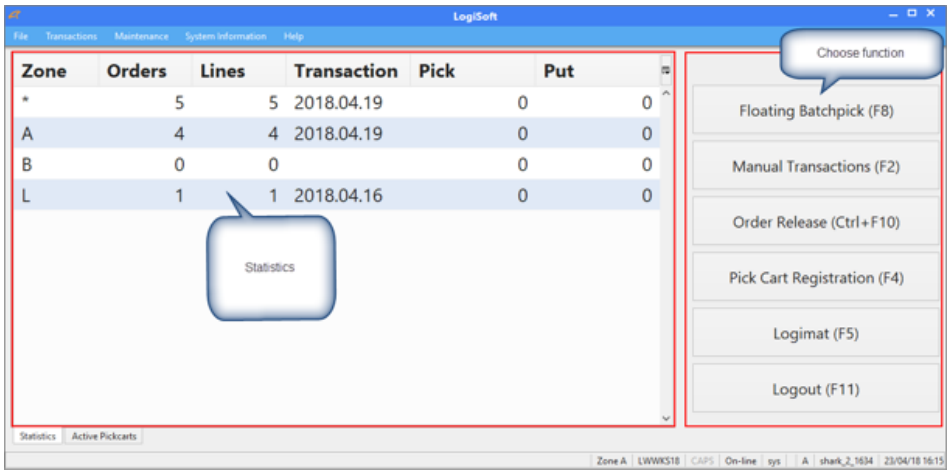
Push the [System] button and enter the default "shark" password.



We will later look at how to create new users and define privileges for each user.

The Start-up screen

When the user has logged on, a start-up screen is shown from where the most important functions are chosen using large buttons other functions may be reached from the menu bar up above.



Main menu after logon.

The menu above is divided into logical groups:

Statistics: On the left, a number of statistical figures are shown.

Files: Log out here, LogiSoft is turned off, and there are some file related import/export functions.

Transactions: You can find all operations related to pick and put-away under *transactions.*

Administration: If the system configuration is changed, new ones set up etc., this will be done under *Administration [management]*

System information: Transactions log, system log, statistics and other general information are found here.

Help: Online help system and information on which LogiSoft versions are being used.

Order statistics

In the left side of the startup picture, several pieces of statistical information are shown, which can be used to gain a quick overview of where there is work to do.

Zone	Orders	Lines	Transaction	Pick	Put
*	5	5	2018.04.19	0	0
A	4	4	2018.04.19	0	0
B	0	0		0	0
L	1	1	2018.04.16	0	0

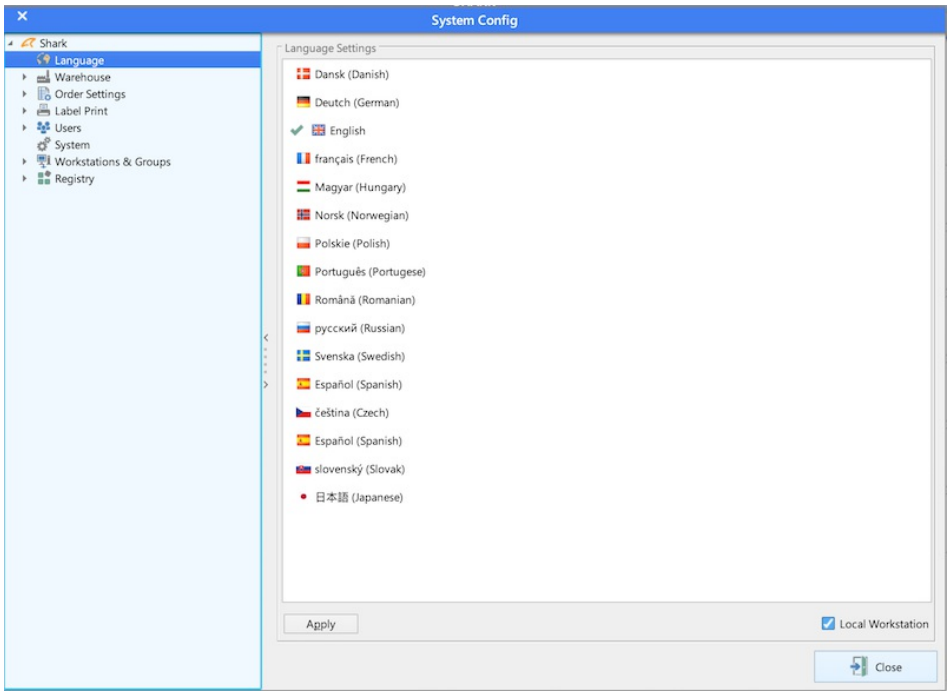
- The symbol ”*” shows how many released pick orders currently are waiting. It is released orders, where picking has not yet been started.
- From each zone, you see how many of the total released orders that will be processed in this zone.

Please note that the sum may be bigger than the total, since an order may operate in several zones.

- Here you see how many of the released lines that have not yet been picked (awaiting). Total and for each zone. The sum can also be larger than the total if an order line has more transactions in several zones.
- How many put-away transactions that have been done in the last hour. Total for each zone.
- When the last pick or put-away was accomplished in the zone. Based on "*" shows the most recent time of picking or put-away of articles in the warehouse.
- How many picks have been done within the last hour. Totals and for each zone.

Change the Default Language

The default startup language is set at installation time. If it does not match what is requested, it can changes from the menu: Maintenance -> System Config -> LogiSoft -> Languages.



Double click the language to be used and press "Apply". If "Local Workstation" is selected, the language will only be changed for this PC else it will be the new default for other PCs as well. Change the language will first take effect after restart.

Creating locations

A basic feature of a WMS system is to keep track of where the articles are stored and how to find free space. This is accomplished by warehouse locations which are an area in the warehouse managed by LogiSoft and having a unique address. It is important to understand that LogiSoft must know the layout of the warehouse and it is not possible to store articles in a location not known to the system. It might seem a little complicated to define the location structure, but it pays-of later and typical something that only have to be done the first time and if the physical locations are changed.

The physical division of the warehouse is hierarchical, where:

1. Articles are stored in locations, each location has a *location type*. A location type has a physical size, like a pallet or a certain box type and other properties.
2. The locations are grouped by *trays* (carriers).
3. Trays are grouped by modules.
4. Modules can optionally be grouped by Aisles. A module can also be a vertical lift.
5. Aisles or Modules are grouped by zones.

Read more about locations here.

Defining Zones for the Warehouse

LogiSoft supports both static shelving and automated warehouse equipment. This requires that LogiSoftS knows the precise layout of warehouse to work probably.

The warehouse is divided into one or more zones. The purpose of the zones are:

- To create a limited work area for the individual operators.
- Divide the warehouse into different physical areas.
- For defining buffer zones used for replenishment of other picking zones.
- Define zones for special use, for example for cross docking in goods reception or inspection of incoming goods.

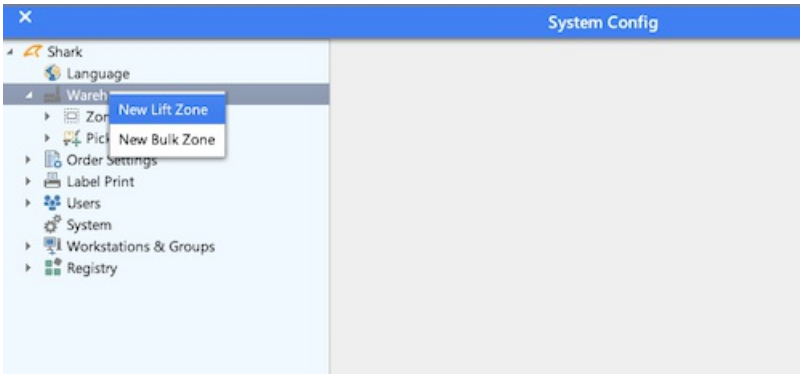
Fixed warehouse zones may be covered by one or more employees with either PDA's or picking lists.

Typical only one person at a time can work in the automated zones.

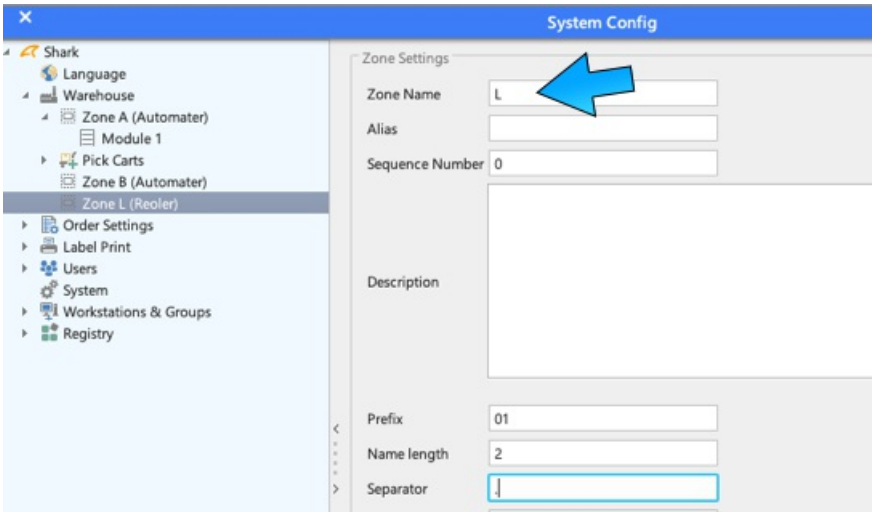
> The naming of the locations are also defined at this time. This cannot be done after the first location in the zone has been created! The zones are fixed and are difficult to changed once they are in use. It is therefore important to make it right from the beginning.

Step 1 - To create a new zone.

1. Open Maintenance -> System Configuration -> Warehouse.
2. Right click the mouse on "Warehouse".
3. Choose the type of the zone.

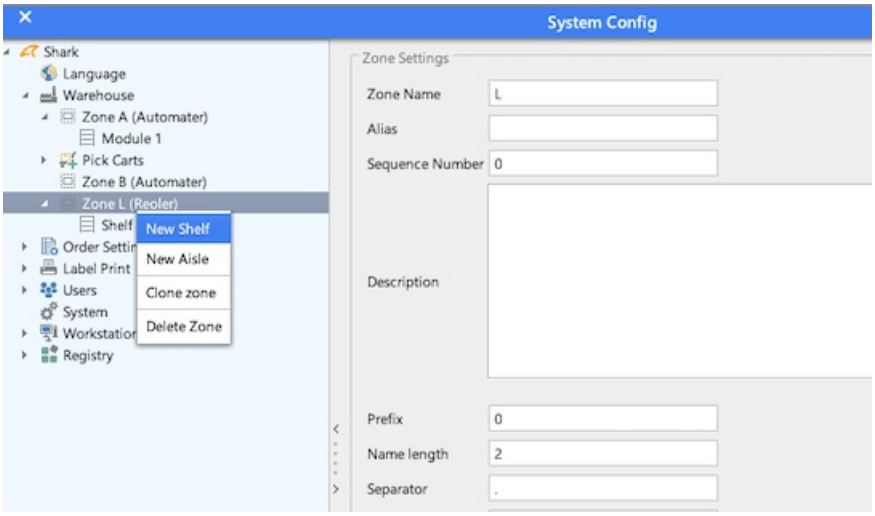


After the zone is created, change the name:



Now it is also time to set the syntax of the location naming. This is the 3 fields "Prefix", "Name Length" and "Separator". It defines the name of the zone and the separator between the zone and the module.

Creating Modules



Modules are always numbered and it is not possible to change this to a textual name.

For the following the modules, it is possible to clone an already existing one.

For the module, it is also defined how the location address structure looks like. Get it right the first time and it is recommended when the first locations are created, to check the location addresses before proceeding (this can be done from System Information -> Report)

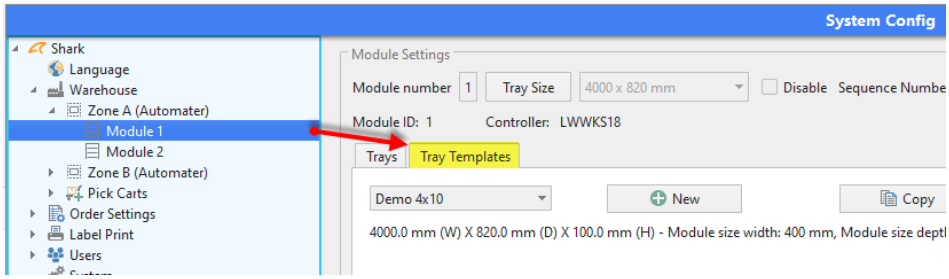
Example of location addresses. The picture shows aisle 1, at rack 3, shelf 3.

Defining Trays, Location Types and the Locations

Vertical lift trays and rack/module shelves.

Remember that only *types* are being set up. The actual locations will not be set up until later. The idea in first setting up a *tray type* is that it can easily be used several times. Therefore you only need to ”draw” it once. Some standard tray types may already be available for use.

Step 2. Open ”Tray Templates”



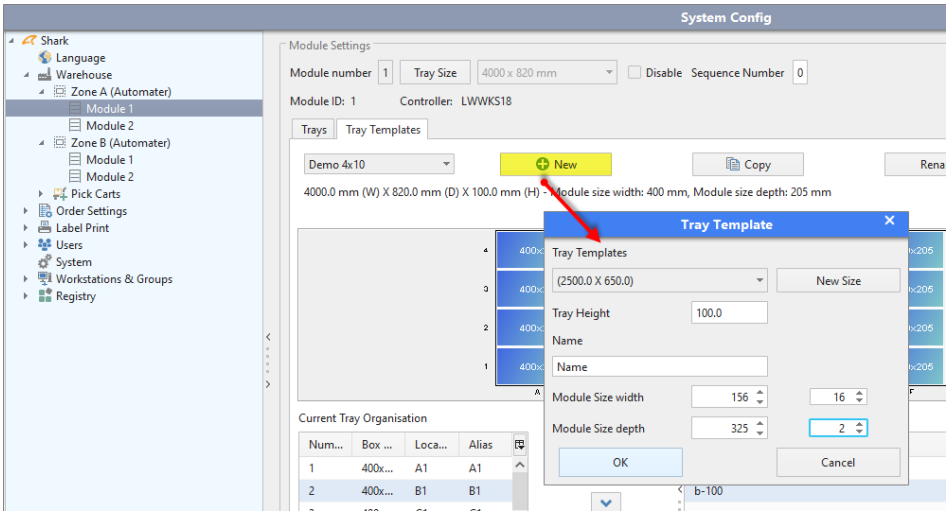
Step 3. Set up location types (boxes).

Before you are able to define a new tray/shelf, you must first set up the boxes (location types) in the trays. See under ”Available boxes”. If the desired box dimension is not available, push [New] to set up the box. Then you will be asked to enter a location cart type name. When this has been done, select the box again from the list of boxes, and enter the dimensions on the box, which is done in millimeters.

Step 4. Set up a new tray type.

Now the necessary boxes are available.

Push [New](Tray type) and fill out the menu. First, select the tray size. The tray height is set in mm, and must be correct, so that the requested boxes can be on the tray. The name of the tray may be released, but pick one that is practical to remember. Then set the next 2 module dimensions, width and depth of the tray. This determines the size of the ”network” the tray is divided into. Be careful not to select too small a module dimension, since it gives very long location addresses and makes the system slower. Typically, a tray will be divided into a number of larger modules, for example into 1/16, so that if the width is 2500 mm, the module dimension is set at 2500/16=156 (always round down if the result isn’t whole number).



Setting up of locations

Once a basic structure along with trays and shelves have been defined, the final locations may be set up.

Step 1

Open Administration -> Systems Configuration -> Warehouse -> Zone -> Module.

Now, return to system configuration and select the previously set up module.

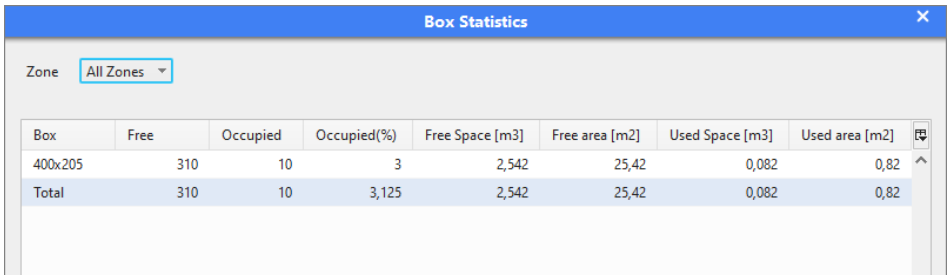
Step 2

Set up tray/shelves

It is now possible to place the previously set up tray type on each shelf/lift shelf in the module.

This is done by defining which tray type is to be used for which module/rack number. As soon as a tray type has been placed on a shelf, the actual warehouse locations are being set up.

See also under the menu item *System Information -> Box Statistics*, where this will be evident, when new empty locations are set up.



Location Setup in Vertical Lifts

If you do not have automats, this section can be skipped.

To make the most out of the Vertical Lifts, it helps if you have a good idea of the required capacity for the automat area. The normal and most effective configuration is that only one operator works at a time in an automat zone. The capacity is the number of picks to be accomplished over a given period of time. Finding the maximum requirement, meaning how many picks there needs to be able to be picked during the busiest hours. If 250 picks are to be picked per hour in the automats, during the busiest hours, and you expect being able to pick 120 per zone, you must accordingly have at least 3 zones. Here it may be important to estimate whether the needs of the computed capacity cannot be changed, whether some orders may be handled at a different time or if some orders can be delayed, for example by prioritizing the individual orders. Generally, there is no reason to divide the warehouse into more zones than necessary, whereas it is practical to have many zones during busy times, it may also be a disadvantage at other times.

> It is possible to group 1 or more zones into 1 work group and thereby having 1 operator operating multiple zones. Work Groups can be reconfigured, but not while in use.

If there are articles with a very high turnover and of proper size, it will often be smart to pick them in automat zones, but placed outside of the machines, for example in flow racks or on pallets on the floor. In practice this is done by defining a *virtual automat* in the zone.

Articles with high pick frequency can be placed in the different lower trays of vertical lifts. When the system has been in operation for a while, it controls this by itself, but during start-up there is no data yet available for this computation.

If articles have a relationship to one another in such a way that they will often belong to the same order, it is an advantage to store them in the same tray.

Trays in vertical lifts may be used in many ways. A few simple rules might help here.

Use if possible a standard modular measurement, so that you start with a small box, and then make one which is twice that size, etc. This makes it much simpler to design and easier to modify existing layouts. You may, for example, exchange two small ones for one that is twice as big.

Try to design with "one pattern" of different sized boxes. This makes it easier to find the right box based on the screen picture.

Estimation of Capacity

Estimating how many picked articles that can be handled per employee will depend on several parameters.

For automated zones:

- How many vertical lifts are in the zone? If there is only one, there will always be waiting time for the next tray, if there are many vertical lifts, there will be little or no waiting time for the vertical lifts. Three machines will typical be sufficient to keep one operator occupied.
- How much time is needed to pick the article (handling time). Should the articles be counted, put into plastic bags, have labels attached, which are all things that take time and limit speed.

Article Master Data

If the dimensions and weight are available for each article, it may be a good idea to store this information in LogiSoft. This will enable LogiSoft to make smarter decisions at put-away process.

When possible the following rule is recommended: One article type (SKU) for one location. For mixed-locations LogiSoft cannot handle free space management and it more difficult to pick from a location that contains multiple article types. The default location strategy is one SKU for one location.

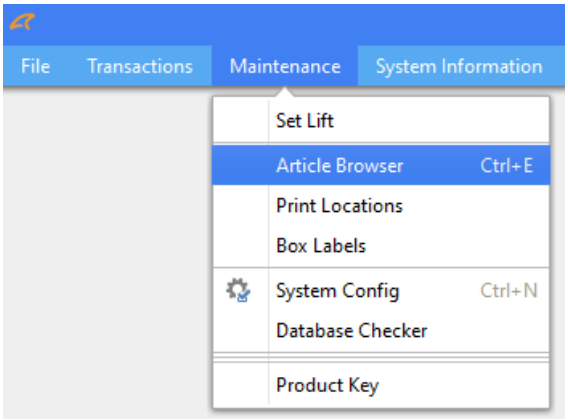
When a new installation is put into use, it is often necessary to load *master data* for the articles which are to be used. Master data typically constitutes an article number, article description, EAN code and other article information.

How this is done, will depend on how the installation is configured. If there is hook-up to a Host or an ERP system, data will often come from there automatically, and nothing else needs to be done.

It will also be possible to import data from a file via menu item File -> Import.

The basic, but also time consuming way of setting up articles is in the ”Article Editor”.

Step 1. Open the Article Editor.

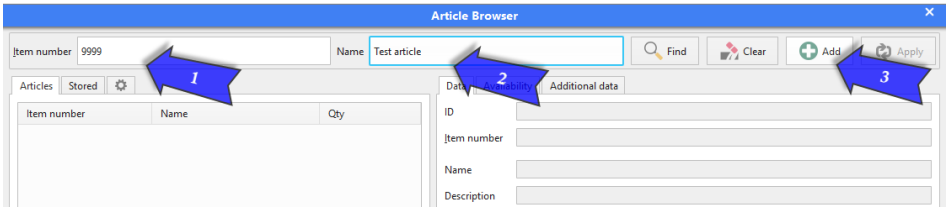


Step 2. Set up a new article.

The new article can now be set up by entering an article number and a name. Then push “Apply”. Apart from this basic information, here you will find much further information on the article which may be added. This could be for example where and how you want the article to be stored or information used, upon receiving the article, to find the right space for the article.

Try for example to create 3 articles that we later can store in the system, add an article description of own chose:

- AN1000
- AN1001
- AN1002


Article Browser
Item number
9999
Name
Test article
Find
Clear
Add
Apply
1
2
3
Articles
Stored
Item number
Name
Qty
Additional data
ID
Item number
Name
Description

Store the Articles

We can now try to store the articles using "Manual Transactions". This will store articles in the warehouse, without orders.

Read more about Manual Transactions.

Check the Transaction Log

TBD

Check the Stock Report

Create an Outbound Order (PDA)

TBD

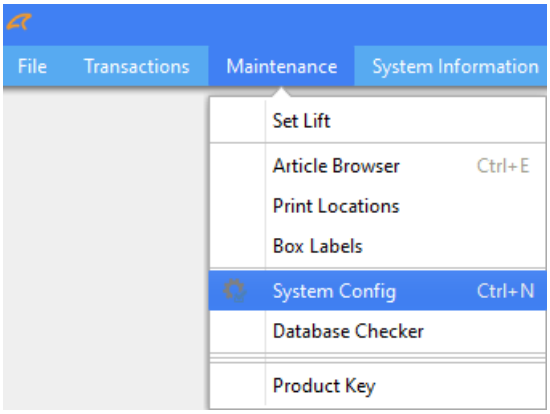
Create an Outbound Order for Automats

TBS

Add more Users

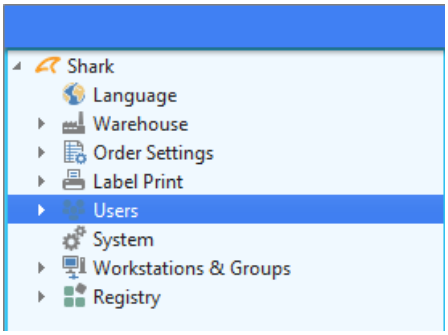
Set up the first users. It is usually smart to ensure that the various job functions, have access only to what is necessary. This is done by limiting access rights.

Step 1. Open Systems Configuration.



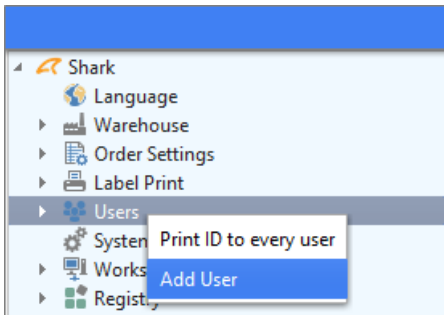
Step 2. Select Users.

Now, select ”Users" under “System Configuration”.



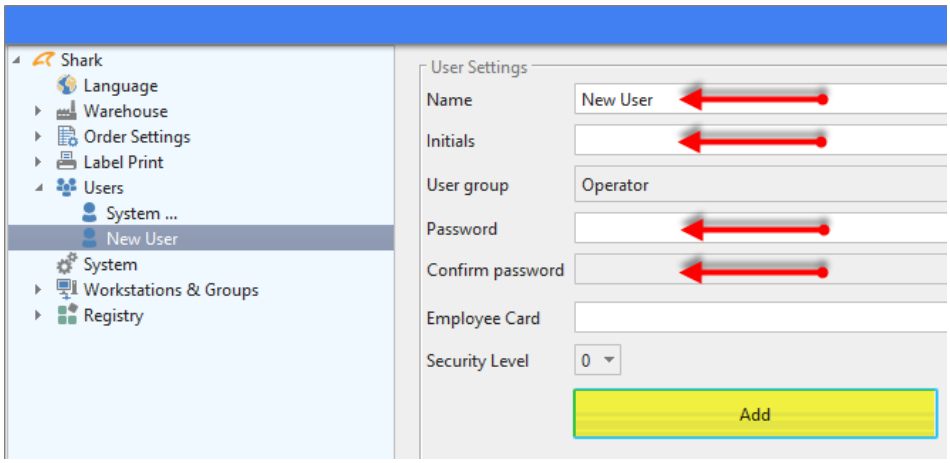
Step 3. Set up a new user.

Right click ”Users", and select ”Add User”.

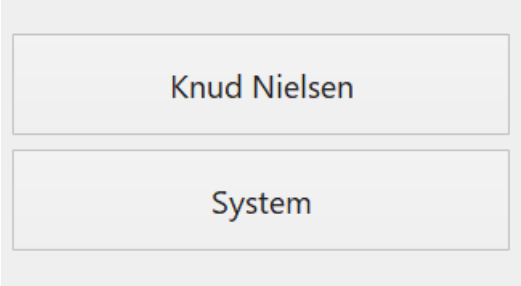


Step 4. Enter information about the user.

First click "Add User", enter the necessary information, and click [Add]



Subsequently the new user will be available and show up be on the logon screen as:



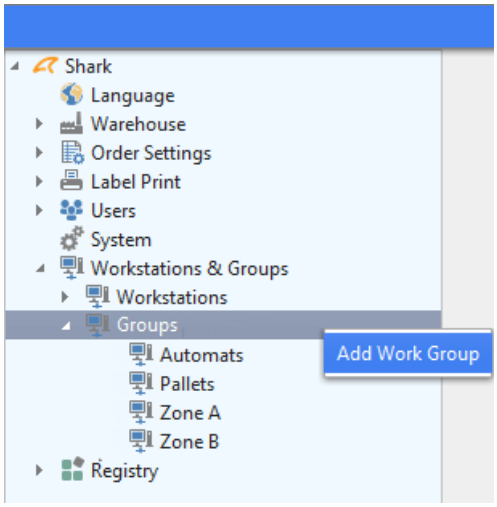
Setting up Work Groups

If you need to use more than one zone, it is important to have defined the correct work groups for the system to function correctly. The work groups may be used, for example, in connection with starting pick carts and the like which will be used in several zones.

Step 1. Open Systems Configuration.

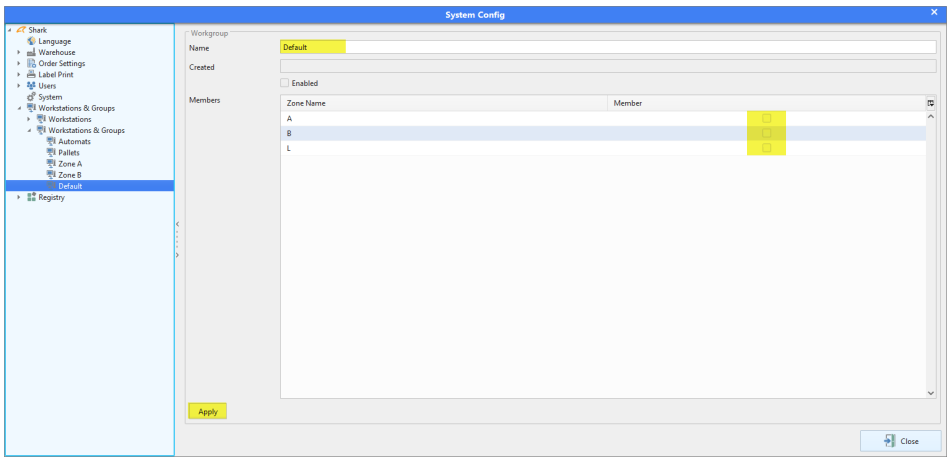
Open Systems Configuration -> Work Stations and Groups -> Work Stations and Groups

Right click "work stations" and select "Add workgroup".



Step 2. Enter information on the work group.

Select the new work group, give it a name, and select the zones belonging to the work group. Then push "Apply".



Setting up Workstations for Hardware Control

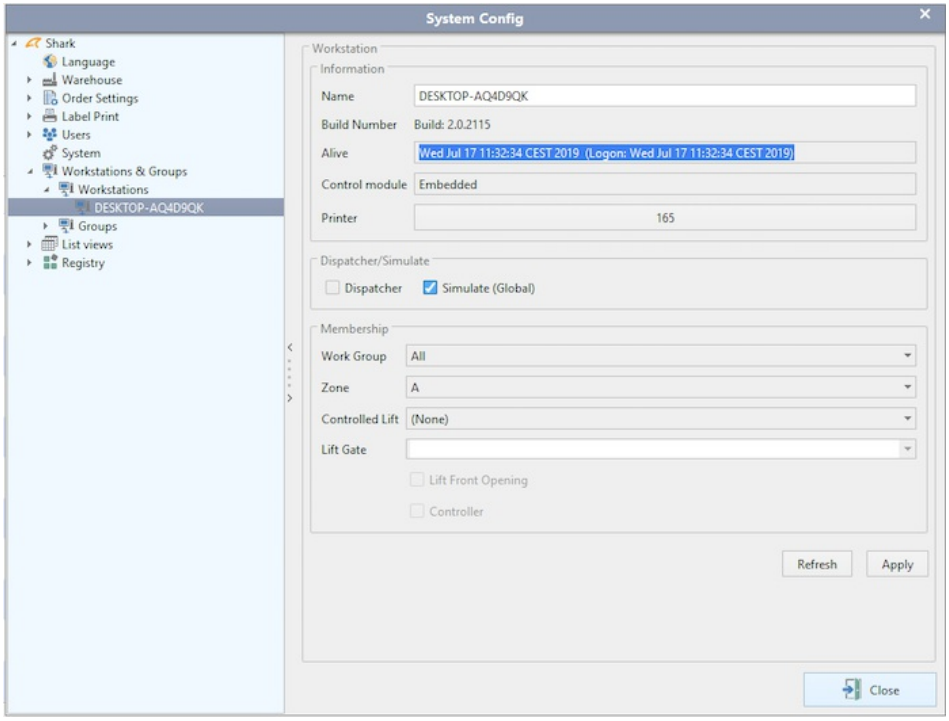
Some workstations are used for specific purposes, like controlling hardware like one or more vertical lifts (automats) or printers.

Open the workstation configuration panel from

Open Systems Configuration -> Work Stations -> Work Stations

Setting up control of a vertical lift

Only one workstation is allowed to control one automat, you can either have one workstation to control all vertical lifts in a zone or one workstation that control all lifts.



Set the following:

Work Group: Select an already created work group that will be used. That work group must contain the zone(s) that the lift that are going to be controlled is a part of.

Zone: Choose the zone where the vertical lift belongs.

Controlled Lifts: Select the lift that this workstation is controlling or "All" if there is only one workstation for all lifts in the zone.

Lift Gate: If the lift has multiple openings, you must also choose the opening this workstation is related to. One workstation is required for each opening.

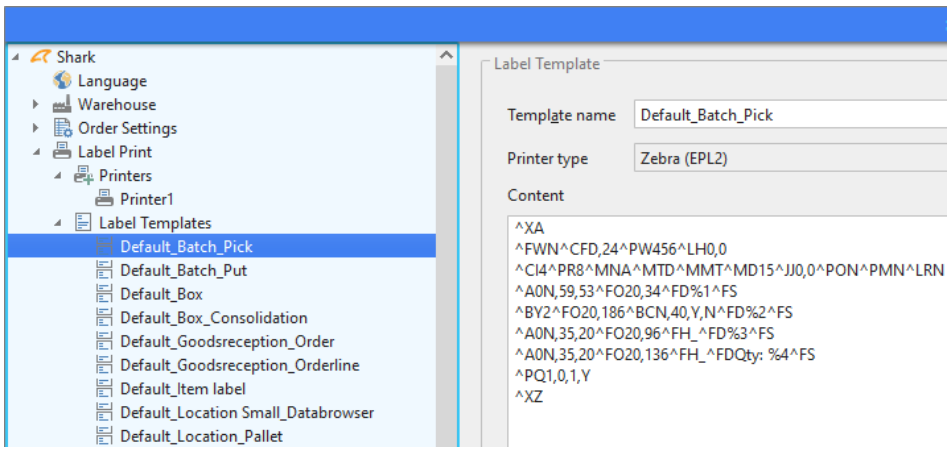
Lift Front Opening: Deselect this, if the opening in the back of the machine, then the displayed layout will be mirrored.

Define labels

Set up label templates for those labels which could not be printed.

For each PC from where labels will be printed, a label printer needs to be installed and a label template must be linked to the functions from where the printing is done.

Labes are set up under ”System Administration” [systems administration] and ”Label udskrift” [label print]. How this is actually done in practice will depend on the printer type, and when the labels are to be printed. Here follows a general description of the procedure.



Step 1. Set up labels for each printer type.

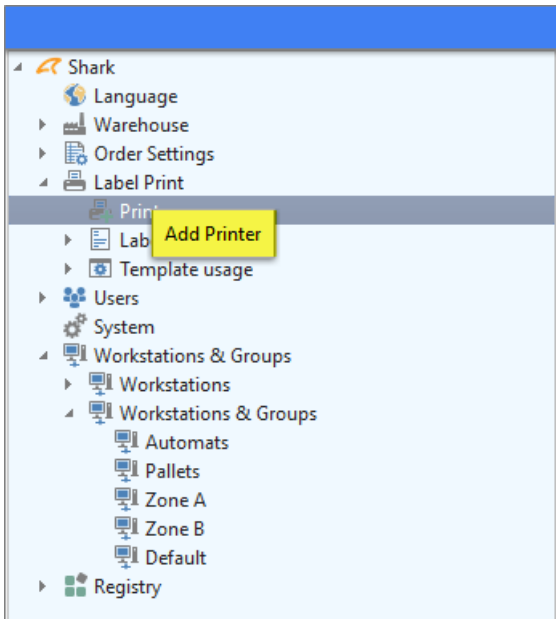
A template must be set up for each printer and label type combination requested for printing. You may use the same template for different purposes, if they otherwise look alike. Templates are written in the printer’s printer language, you may however, often use a program which comes with the printer in order to generate the correct codes.

Templates are set up under Label Print->Templates

Step 2. Set up printer.

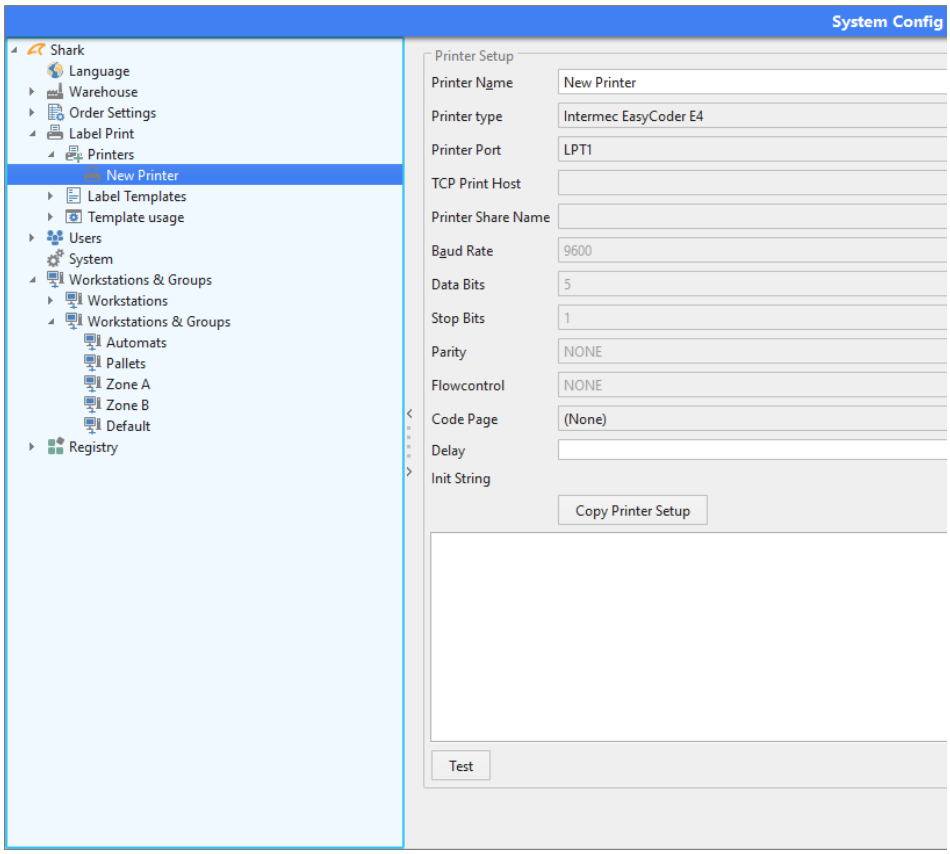
This is done from the PC that the printing is done from!

Using the mouse, right click printers, and select “Add Printer”.



Step 3. Enter information on the printer-

Now enter the necessary information on the printer. It must have a name, and you must select which printer type is being used, and how it is linked to the PC from where the printing is done.

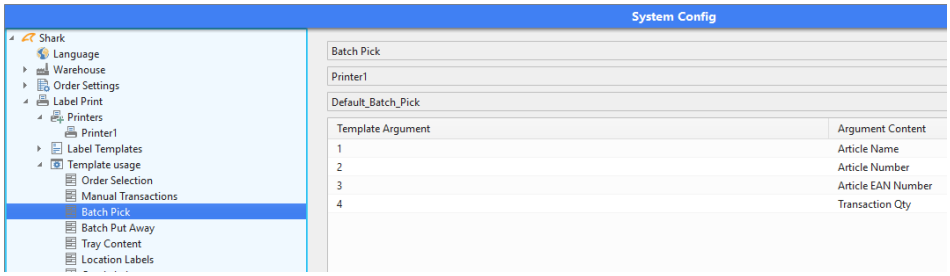


Step 4. Link template, printer and function together.

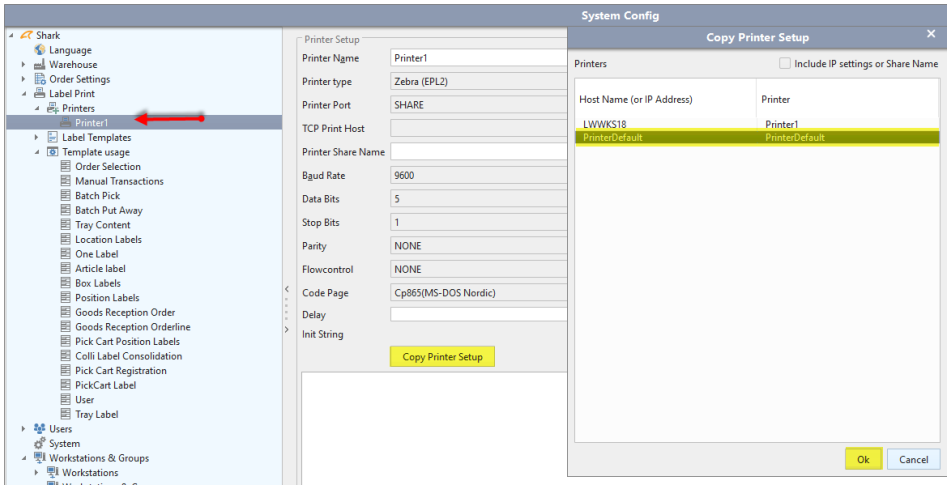
Then, we need to tell under what functions the printing should be done, with which template and to which printer and just as importantly, what needs to be printed.

Select, under ”Template Usage", from which function the printing is done. Here is ”Batch pick" selected, which is the label printed from the *Batch pick screen*. Now please select the template and printer to be used.

Then you may select which type information that needs to be printed on the previously installed template.



To activate a default template setup, copy “PrinterDefault” as shown below:



Connect to a host system

Normally LogiSoft is connected and controlled by a host or ERP system. The host system will send orders and receive confirmation back. The default format is XML files. This is described in more detail in the technical documentation, please refer to Host Link Documentation.

Basic Concepts using LogiSoft

In the following pages we will go over the basic concepts that are important to understand, in order to get the full benefit out of the system.

Location Management

One of LogiSoft's most important tasks is to keep track of where the articles are stored and where there is free space. This is accomplished by *warehouse locations* which are an area in the warehouse managed by LogiSoft, each having a unique address. It is important to understand that LogiSoft must know the layout of the warehouse, it is not impossible to store articles in a location not known by the system. This is important in order to optimally manage the location utilization.

The physical division of the ware house is hierarchical, where: articles are stored in boxes, boxes stored in trays, trays are stored in specific lifts (automats), and lifts are grouped into picking zones.

Example of location addresses. Here we are standing in aisle 1 looking at rack 3, shelf 3.

Storage Strategies

Different *strategies* can be defined for how locations are to be used. There are 3 basic types with individual advantages and disadvantages:

- Fixed locations.
- Floating locations.
- FIFO

For all location types in LogiSoft, the same article can be put away in more than one location. For all new articles, LogiSoft has a standard strategy that applies to the whole system, but apart from that each article can have its own strategy. Which means it is possible to choose the method best suited for the article type in question. If the articles stored, for instance, are mainly articles not requiring FIFO, the standard type can be set to floating, but for individual articles with an expiration date such as batteries or other articles with limited shelf life, the strategy is set to FIFO.

Fixed locations

Fixed locations is the classic way of managing locations. Here the articles are kept in the same location every time until something else is decided. From a purely practical perspective, this means that if a location goes down to "zero" (is emptied), it is still reserved for the article type in question. There is rarely any great advantages associated with this rather than for instance, using floating warehouse, but there may be practical reasons for always keeping an article type in the same location.

Floating

It is a standard that LogiSoft supports floating locations, also called a *chaotic warehouse*, meaning that the same type of article can be stored in several different locations, and whose locations can be changed on a regular basis. LogiSoft will suggest where an article can be stored and then keeps track of where the article is actually being stored. There is no guarantee that it will be assigned the same location when put away next time.

FIFO

Using this strategy will ensure that the article which has been longest in stock will be the first to be picked. All articles will be stocked with information on how and when they were put away. The FIFO strategy may be somewhat slower to use as it is not possible to just pick the nearest article. Furthermore it requires more space because an article must be put away in an empty location to avoid having different articles being mixed together.

The FIFO date used, is stored on the location.

For articles with batch/LOT numbers, the FIFO date is not the location date, but the date assigned to the batch number (typical an expire date).

Location types

A location in LogiSoft always has a *location type.* A location type has a name and a size (length, height, width). The name of the location type is freely selectable. It could be for example "Blue plastic box" or "Pallet_1". Pick a meaningful name. It will make it easier during daily use. For each article type found in the warehouse, you should state in what type of locations you want the article to be stored and possibly how many of the same articles there is room for in the same type of location. Please note that the same article can have several acceptable location types. In that case LogiSoft will pick the optimum type on put-away, based on location, utilization and picking speed.

It is certainly possible to have several different location types of the same size. This can be used to navigate towards the desired put-away zone of an article.

Warehouse Zones

A zone consists of a number of locations where one or more operators work. If an order is started in one zone, then only the part of the order picked in that zone will be processed.

In ordinary shelves or pallet zones, one or more operators can work simultaneously in the same zone, whereas vertical lift zones only have room for one operator at a time.

A vertical lift picking zone is one or more vertical lifts being operated by one operator. For each picking zone there is one monitor, one bar code reader, one keyboard and often one label printer. Because of the short pause between when a vertical lift has delivered one shelf and the lift picks up the next, it is more efficient allowing one operator to operate more than one vertical lift at a time, typically 3-4 vertical lifts in the same picking zone is optimal. LogiSoft will optimize the picking order, so that the next article picked, to the extent possible, will be picked by the next vertical lift that is ready with the next tray.

There are different type of zones:

- Standard storage as shelving and palles.
- Automated storage as vertical lifts or other kind of automation.
- Flow rack zones.

- Picking front for buffer storage.
- Mobile racking.

Zone for Standard Shelving and Pallets

This is a general location type covering ordinary storage type.

Zone with Automats

An automat zone contains one or more machine operated as one unit. Typical only one operator is operating in the zone at a time, although multiple operators are possible - but they will operate on the same orders. Pick and put-away is done from one shared PC or one PC for each automat.

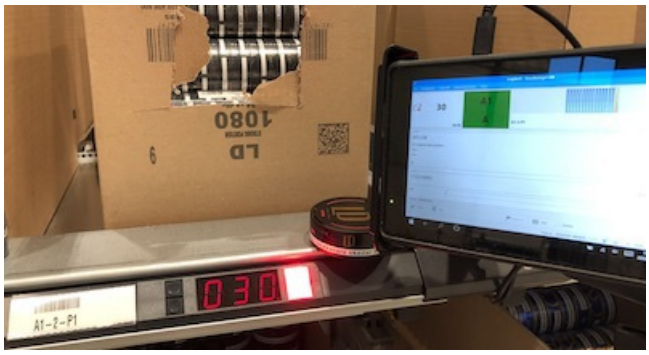
It is possible to include shelving like flow racks in an automat zone. This is typical used for high runners.

Picking Front for Buffer Storage

This is a zone used as *picking front* for another zone where the articles are moved to and from when needed. The movement can be done manually by operators, for example moving pallets from a pallet zone to the picking front from where picking can be done at floor level. It can also be an automated warehouse using AGV's.

Flow Racks

Picking from flow-racks.



Picking from flow-racks using a PC screen and pick-by-light.

Location Addresses

The physical location of an article is specified by a *location address*. There are 2 standard formats. The short one is:

<zone><module>-<shelf no>-<coordinate on shelf>

An example of a location could be: A3-17-B4, which tells that we are in Zone A, the module is 3, the shelf is 17 and the article is found at the co-ordinates B4 on the shelf. Refer to section for an explanation of locations on a shelf/tray. If it is a vertical lift zone, A3 will be the name of the vertical lift.

- A3-17-B4
- Location on a tray/shelf
- Shelf/tray number
- Zone and Rack/Module

Locations on a fixed warehouse may have one additional level, an *aisle number*. Here the address will be:

<zone><module>-<aisle>-<shelf no>-<shelf co-ordinate>

For example:

B1-3-4-A1, designates zone B, module 1, aisle 3, shelf 4, and the location on the shelf is A1.

Whether the one or the other format is used depends on how the locations are set up.

Location Marking

Locations will typical be marked with a label that include the location address as text and a barcode. It is also possible to add *check digits* which is a 2 digit number, automatically generated by LogiSoft that can be used as an alternative confirmation code instead of scanning a barcode.

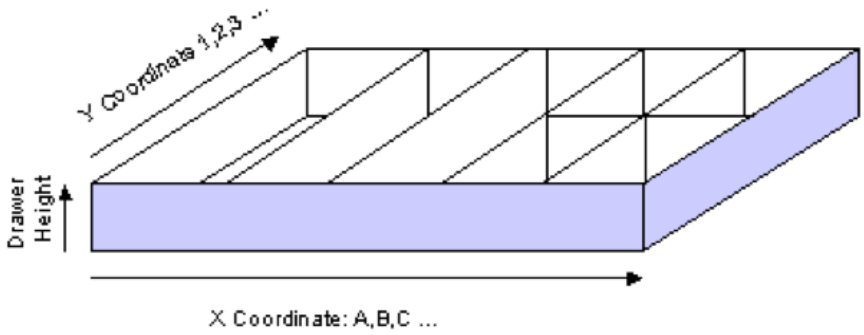
Locations in automat trays

Vertical lifts (automats) use trays to organize the stored goods. A tray can hold quite a few different articles, which makes it practical to know where on the tray an article is located. A simple co-ordinate system is used to designate an article's place in a tray. The tray is divided into rows and columns. From the front of the tray, left

to right, the columns are designated by the letters A, B, C etc. The rows are referred to by numbers 1, 2, 3â€¦ starting from the lower left hand corner. In that way, the lower left corner is referred to as A1. This defines a â€?gridâ€? in the tray. The sizes, meaning the width of columns and rows can be set individually for each tray type.

Because the size of the grid has 2 conflicting interests:

- One location will always fill a complete number of grate fields. Therefore there will be more flexibility if the crate is small.
- The location designation becomes very long and thus impractical to use if the crate is too small.



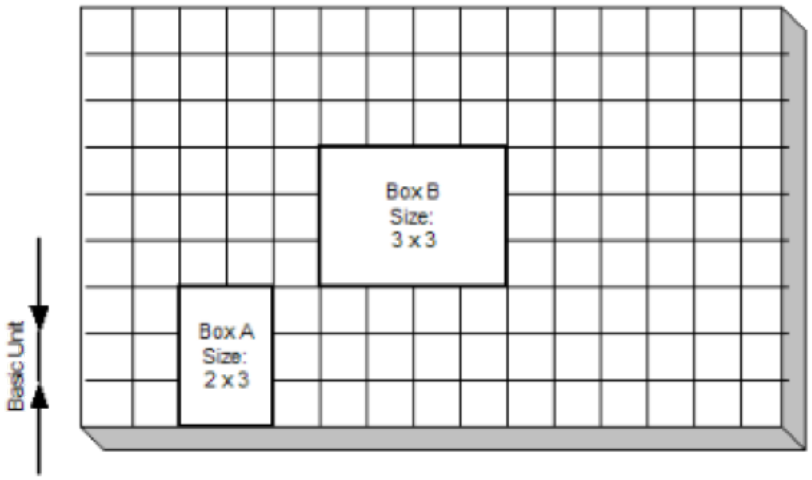
Coordinates are used to designate locations of articles and boxes in vertical lift trays.

In practice, many trays are arranged in the same way, whereby the trays' structure is designated as tray types (templates) having a name, and which can be used again and again.

Boxes are often used to store articles in the trays, thus boxes correspond to location types. It can either be real boxes that can be withdrawn from the trays or fixed divisions of the space in the trays.

There are a few simple rules to the locations:

- The size of the location must consist of a whole number of â€?cellsâ€?.
- Generally, the height of the box should be the same as the tray's height.
- One box may never be placed on top of another.



Examples of permitted box sizes in identical trays.

Locations alias

It is possible to make an *Alias* for the coordinate of a tray location. This is an alternative name which can be used if the coordinate description is not optimum for the application. You may, for instance, choose to call a cell named A4 for "4" or give it an entirely different name. The only requirement is that the name is unique, which means that no other location can have the same name. It is only the last part of the location name that can be exchanged in that way.

One or more locations for each article

LogiSoft allows using as many locations as desired for each individual article. There are both advantages and disadvantages to using several locations. One of the advantages is that several locations give better space utilization. For example, imagine that the whole warehouse only has one location per article number, it will statistically be half filled (50%) assuming that you first fill the location and then pick it until it is empty. If more than 2 locations are used per article number, the warehouse will be 75% filled, because the one location can be used for another article when it is empty (if the warehouse uses floating locations). There is simply much space to be saved by using several locations. Other advantages can include increased speed, because LogiSoft is better able to find an article quickly if it is located on several places and increased security if the article is distributed to several zones and/or vertical lifts.

The disadvantage of having several locations per article is that it may become more time-consuming to put away the articles as more put-always are required for each article type. Sometimes an order line will require 2 pickings to reach the desired amount for an order line.

Buffer storage and Replenishment

Large volume articles with high pick rates, can benefit from having an easily accessible picking location, for example in a vertical lift and a second buffer location in a more inaccessible parallel location. There are two ways of handle buffer locations.

1. Store the goods in a dedicated buffer zone and has a another zone as picking zone. This requires the replenishment data to be defined correctly. This is the way to do it in Automats. The goods will be moved by replenishment orders.
2. Store all goods in one zone and mark the locations used as buffers as *buffer locations*. Can be done from location management (whole pallets) or the Storage Manager (indiviual locations). LogiSoft will then prefer to pick from the none-buffer locations, but if it cannot pick the whole quantity from a picking location, it will still direct picks to the buffers (to avoid emptying the picking location). The goods are typical moved by means of the replenishment list in the PDA.

Mirrored storage

One variety of the *same article being stored in several locations* is called *mirrored storage* where the same article is located in several zones. This way you can often avoid order consolidations since the total order can be picked from a single zone. But here the management of the system becomes more complex.

Location sequences

The location addresses don'tÂ always reflect the optimal picking sequence. Therefore it is possible to control the order or the *sequence,* with a sequence number for each location. Generally the sequence number runs sequentially with the address, but the number can be changed if necessary. The rule is that the lowest sequence number is to be picked first. One example where you might want to change the sequence is in aisles where you might want to pick from the one side of the aisle first and then the other side on the way back. Another example could be a vertical lift where the tray number does not necessarily tell which trays are the closest or are nearest each other, the picking opening may be in the middle or at the top. Â

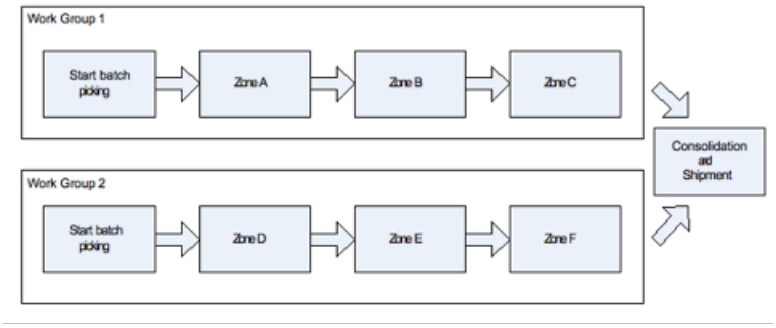
Each zone, aisle, module, tray has a sequence number that can be set in the configuration. If you want to set a sequence crossing zones and aisles, the best way to do this, can be to set the zone and aisle sequence number to the same and only use the *module sequence number* to define the sequence.

There are some limitations to the used sequence numbers:

Level	Number Range
Zone	1-255
Aisle	1-255
Module/Rack	1-4095
Tray/Level	1-255
Coordinates in tray	1-1048575

Work Groups

Work groups constitute a way of grouping zones, which work together. One *work station* (pc or terminal), can be attached to a *work group*. If you start a picking cart on a work station attached to a work group, all the picks that can be run in this work group can be started simultaneously. Simply put, the work group will work *serially* between the zones (relay picking), whereas you work *parallel* if the zones are not in the same work groups.



Example of 2 work groups where the order is being picked parallel, but where the work is done serially within the work group (relay picking). Within work group 1 a picking round is started, for instance, on a picking cart. The cart is given all the transactions found in zones A, B, and C. The cart picks first in one zone, then in the next etc. Another cart can be started up at the same time totally independent by work group 2, where other transactions for the same orders can be picked.Â The 2 picking rounds are first consolidated in shipment and packing towards the end.

Thus the work group can decide that a picking round started within the work group is done serially, one zone at the time, whereas the work between work groups is done parallel to each other.

If the same order is being picked simultaneously by several work groups, it is most practical that the order is picked at somewhat the same time, as it will normally be shipped collectively. For this purpose, Shark has one option for prioritizing an order such that, if an order is opened in one zone, it will automatically be given a higher priority in the other work groups.

Article Management

Articles or goods are the basic units being stored. LogiSoft creates a database with a list of all the article types in the warehouse and the characteristics of each item, this is called the master data for the articles. It is not possible to store an article that is not first set up and defined in the system. Article types can be set up and defined without actually ever being stored in the warehouse. Setting up new article types can either be done manually or by importing the information from an Host System.

The minimum requirement of master data for an article is only the article number.

Article number

Every article type should be given an article number for unique identification. This number is often used as a bar code.

Rules for article numbers:

- All articles have an article number.
- Article numbers are unique; two article types cannot be assigned the same article number unless they have different â€?ownersâ€?.
- Acceptedd characters in an article number are numbers and letters, spaces can also be used, but should be avoided if possible.
- There can be max. 50 characters for the number.
- There is no distinction made between big and small letters.

Description

Every article was described using text. This is just information for the user and can be used freely.

Weight

It is possible to specify an article's weight. The weight can be used by the system to calculate and ensure that the total weight capacity, for example in a tray, is not exceeded. Can also be used by LogiSoft to figure out how much can be contained in a pick box and for calculate shipping weights.

Dimensions

It is possible to specify an article's size. The size is used by the system to calculate how much vacant space there is for new article units at a given location and can, depending on the system structure, also be applied to compute the quantities that can be picked for a given box.

EAN codes

If EAN codes are to be used, this can be specified, and this will in turn allow LogiSoft to recognize an article based on an EAN bar code instead of, or in combination with the article number.

Alternative article numbers

There are ways of specifying an â€?alternative article numberâ€? which allows you to have 2 different article numbers on the same article, where the alternative article number may, for example, be used as bar code

acknowledgement. Typical use is changing article numbers. In order to be able to still use the previous number during a transition period, it will be set up as an alternative number. It can also be used when using both an internal and a vendor article number.

Zones and location types

For all articles you need to specify where the article should be stored. If this information is not available, LogiSoft cannot find space for the article on receipt of the goods. For a single article type, the following can be specified:

- In which zone you want it stored.
- Which location types the article can use.
- How many items can be stored on each single location type.

If the information is not available on receipt of the goods, LogiSoft will ask for necessary information, minimum is a zone and a location type.

Package Sizes

LogiSoft supports packing sizes for the article, meaning that the article can be stored and managed in packaging units. Number and dimensions of the packaging may be specified.

The general rules used for handling different packages:

- Internally the quantity is always the "base unit", for example pieces. The is true both for order line quantities and stock on locations. This means that if package size is changed it will not change the stock.
- When an order is imported from a Host, the package size can be specified. It will be converted to base unit and the package size will be stored on the order line.
- When the pick is displayed, it can be displayed with the package size specified on the order line.
- When reported back, the quantity will be recalculated to the package size.

Packaging sizes can be difficult to maintain. If this is not a facility being used, the following may largely be ignored! In that case, it is always the package dimension â€?1â€? which LogiSoft sets up by itself (called P1).

The package dimension "1" (called P1) is standard size and must be defined for all goods (done automatically). In Shark, the package dimension is a named unit, for example 'P1'. This name is attached to a number specification defining the size. It is naturally a good idea, however, not a must that name and size are interconnected.

The reason why the package dimension has been defined for each individual article is so that properties such as height, length, width and weight can be ascribed to the package dimension. Thus, whenever an article is stored in a package, it is not only the single article's dimensions that will be recorded, but all of the package's dimensions.

Apart from the package dimension, you must also specify where in the warehouse (which zones) a given package size may be stored. More than one package size can be stored in a given zone. This means that in any location within the elected zone, all specified package dimensions may exist.

Batch or LOT numbers

Batch numbers, also referred to as â€œlot numberâ€?, are supported by LogiSoft. A batch is typical a group of articles produced in one run. Batch numbers is a text string of up to 50 characters. It has also a date assigned, which can be the production date or the expire date.

If batch number is enabled for an article, the operator will be prompted for the number, while receiving or storing goods. Here it is also possible to specify the date. Picking can be done either for a specific batch number or the system will automatically find a batch number, which batch number then is selected depends on the general picking strategy.

> Never mix the picking strategy when working with batch numbers, either always supply the batch number from the Host System (The Host decide or never (LogiSoft decides). If mixed there is a risk that, that the Host might pick batch numbers already picked or allocated for other orders.

For standard locations, it is not allowed to mix different batch numbers of the same article type on same location.

> Batch numbers can be used for completely other purposes, like using it for "article dimensions", currently not supported by LogiSoft (eg. color or size).

Serial Numbers

LogiSoft supports serial numbers for stored articles. A serial number is a unique identifier for a specific article type (SKU), the maximum length is 50 characters. If serial numbers are used, it is defined at article level, this means that for each article it can be defined, if serial number is required.

The article has a property called *Requires Serial Number*, this must be set to use Serial Numbers for this article. The flag can be set in the Article Editor or it can be received as Master Data updates from the Host.

Serial Numbers can be used in fourÂ different ways:

- *Serial Numbers are registered when the article is picked*. There is no registration of the number until the article is picked. This is the most simple solution to maintain and are recommended in most situation, where the need typical isÂ that it must be known which customers receives what.
- *Serial Numbers are registered at goods reception and reported back.*
-
- *Serial Numbers are registered both at goods reception and when picked*.
-
- *Serial Numbers are fully traced*, also at which location, if the article is stored at more than one location. Note this can be time consuming to maintain and makes some operations more or less impossibly, like internal replenishment where the Serial Numbers must be identified.

The Host System can either let LogiSoft decided which number to pick or the order line can define a specific number. If possible let LogiSoft decides, it is much faster to pick.

> Unless it is a requirement, it is recommended to use the simple model, where serial numbers only are registered at picking. It makes the daily life easier.

Storage Strategy

When receiving goods, LogiSoft is able to suggest the storage location automatically. The calculations behind are rather complicated and are based on the supplied parameters, so the old rule, garbage-in-garbage-out really fits here.

Some of the parameter that might effect the suggested location:

1. *Storage strategy for the article* (FIFO, Fixed, Floating).
2. *The zones where the article is set to be stored* (replenishment data).
3. The *location sizes* and *location quantities*. The system will try to find a location with minimum waste of space.
4. If *package sizes* are used, they will also be taken into account.
5. The *ABC picking rate* class. The system will try to find a location with the correct picking rate classification.
6. If *batch numbers* are used.
7. For automats special parameters are available for *spreading goods between machines and trays*. This is a trade-off between speed, space utilization and security.

Multiple Owners of the Articles

Shark supports that there can be several â€?ownersâ€? of articles in the warehouse. This means that in practice the same article number can be used with different owners. The function is typical used where the same warehouse is used for different users/customers, for example in connection with 3PL.

General rules:

- Goods cannot have more than one owner per location.
- One item can only have one owner.
- If the same article number appears with different owner, it is regarded as different articles.

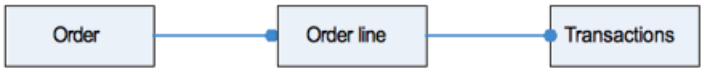
Orders and Transactions

When LogiSoft is connected to a Host System, the picking and put-away is controlled via *orders,* which can be picking orders, put-away orders or more special order types as lists of articles for counting purposes. Every order can in turn be comprised of a number of *order lines,* which will typically contain an article for picking or storing. In order to execute the order, the warehouse needs to carry out one or more work operations, which in LogiSoft is called *transactions*, they control from where the article is actually being stored or picked. It can be necessary with more than one transaction for each order line, although naturally you want as few transactions as possible. There may for example be 2 or more transactions if:

- The article cannot be picked from a single location.
- The article must be stored, but there is no room for it at one location.

For transactions, the following applies:

- When one transaction has been generated for put-away at a location, it reserves the requested goods at the said location. This means that other orders cannot turn up and "grab" the article. If the stock is insufficient and another order is to be given priority, the original order should be withdrawn, thereby cancelling the transactions for that order (See Error: Reference source not found).
- The time when the transactions are generated, depends on the system's configuration. This may happen automatically on receiving the order, according to a schedule, based on delivery time or manually.
- There cannot be more than one storage transaction to the same location at the same time.
- You cannot generate transactions if the goods are not in stock or all articles have been reserved for other orders. However an order may be partly released so that the transactions which are possible may be generated.



An order comprises of a number of order lines, which again refer to a number of transactions.

Order types

The basic order types found in LogiSoft are:

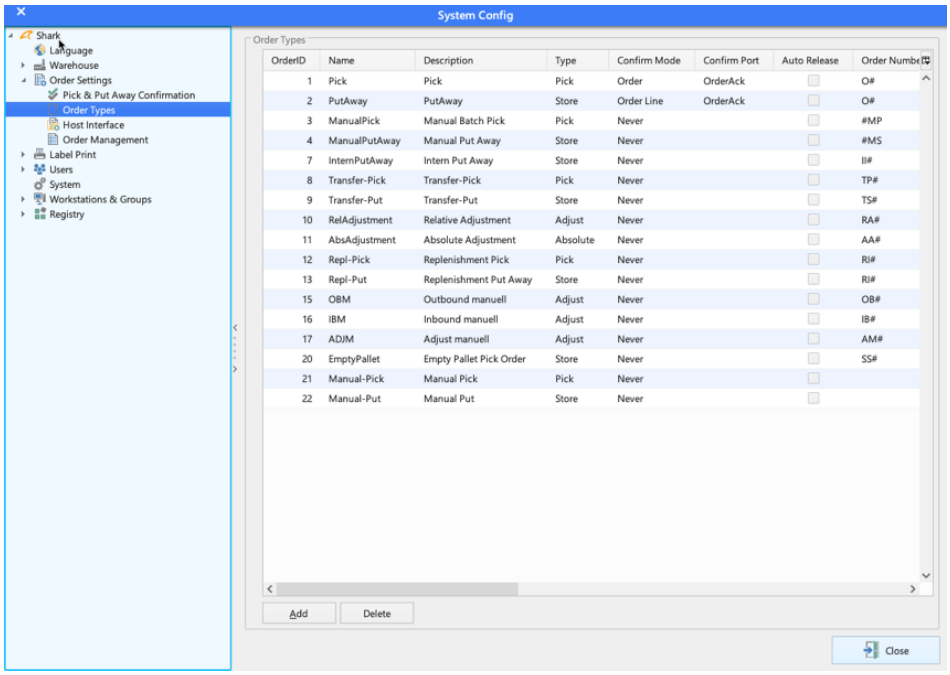
- **Put-away**. An order which pulls goods out of the warehouse.
- **Picking**. An order storing articles in the warehouse.
- **Stock management**. An order adjusting the stock. This is an order generated by LogiSoft itself in connection with adjusting the stock at each location. It is not possible to adjust the stock from a host

system, since the host normally does not know the actual location of the article, which could have been distributed to several places.

For each of these types there are several order sub-types. Some of these types are standard types, which cannot be changed, but apart from that, new types can be set up, so that you may have different order types for export orders, production orders, internal sales, return goods, etc.

Note that an order can only have one type. You may not change the type from line to line. This means that it is not possible to mix put-away and picking in the same order.

LogiSoft is pre-configured with a number of basic *order types.* The behavior of each type can be modified and new order types can be created.



Order number and other information

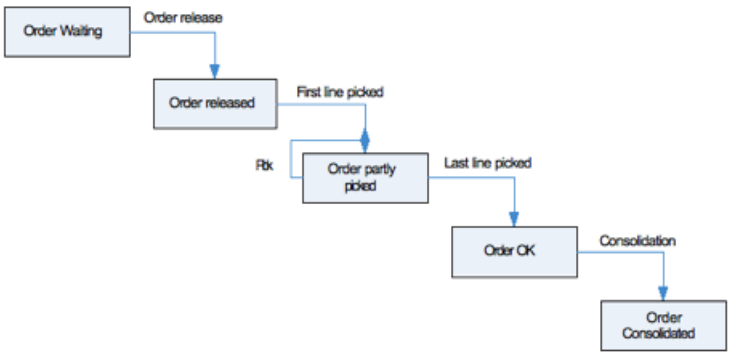
An order may always have an order number and furthermore can have a delivery note number. An order must have a unique order number plus delivery note number within the given order type. This means that you do not have two orders with the same number, unless they have different delivery note numbers, but the same number may be found within different order types.

The order has some information linked to it, which can among other purposes be used in association with the order processing:

- Customer information.
- Delivery note number.
- Delivery address.
- Priority.
- Shipment information like preferred carrier.

Life cycle of an order

All orders have a *status,* and each order line has its own order line status. The total status of the order will normally reflect the single order lines, so that if, for instance, one order line is still outstanding, the whole order will be outstanding.



The order undergoes different phases in its lifetime.

The times at which an order shifts between the different phases are registered by LogiSoft, so that it is later possible to see and measure the single order's passage through the warehouse.

Status: Waiting

An order with the status of â€?Waitingâ€? has not yet been initiated, but is otherwise ready.

Status: Partly Picked

The status â€?partly pickedâ€? means that part of the order has been picked (or stored), but that something is still missing.

Status: Back order

An order with the status of â€?Back order" may only be partly picked or not at all, as there are not enough articles to one or more lines. There are several possibilities for handling this situation:

- Either you may store the missing goods, then the order changes to the status of â€?Waitingâ€?.
- If it turns out to be impossible to acquire the missing goods, the order can be started and as much picked as possible. Then the order may be open, until you complete it in LogiSoft by saying OK, or by picking the remaining amount, when the remaining articles arrive.
- Another possibility is that only the quantity available is not enough, so that there are actually enough goods to fill the order, but there are other orders which have reserved the stock. In this case you may choose to re-prioritize which orders should be picked, and cancel the other order (remove its release) this will let go of the reservation that was placed on the goods..

If back orders are allowed, depends on the application. One strategy is to only sends outbound orders when

stock is available. In that case, a back order status will indicate that there is a miss match between the Host stock and what is registered in LogiSoft. The disadvantage with this setup, is that cross-docking is not possible at goods reception. Cross-docking is a feature where picking of missing goods for an order is done immediately at goods reception without actually storing the goods first in the warehouse.

Status: OK

An order where all lines have been picked completely. It is ready as such, but has not necessarily been through consolidation (packing, control and dispatch).

Status: Consolidated

Consolidation is when an order, where the single order lines were picked in different zones, is brought together to be controlled that everything has been done correctly, meaning that the article number and amount on the order are correct. After this has happened, the order gets a *consolidated* status.

Please note that not all installations use consolidation.

Status: Cancelled

An order can be cancelled, meaning that it will never be picked.

Order priority

An order always has a priority which can be used to sort out in which order, it will be processed by the system. The priority can be set based on the order type, it can be changed by another user, or it can be adjusted by LogiSoft itself. Automatic adjustment of priority might happen, when an order has been started partly. Then it automatically gets a higher priority in order to ensure that the total order will be picked as quickly as possible and simultaneously in all areas. This is relevant if the order is to be picked from several zones and to be sent as a whole. Priority can obviously also be used for rush orders.

Back Order Calculations

An order resting in LogiSoft, but which cannot be picked wholly or partially will be given a *back order status,*Â meaning that it may only be partially picked or not at all. When new articles are being stored, LogiSoft will automatically update the order status including the remainder.

Calculations of whether there are goods outstanding against your order are made as follows:

(Stock of the article) Minus (The quantity necessary for released orders) = (Available stock)

If the available stock is less than needed to satisfy the order, the order remains outstanding.

Please note that it does not mean conversely that if there is noÂ back orders outstanding against your order, that all orders on your system can be picked. If there are several orders that must have the same article, and they have not yet been released, the total quantity needed may very well exceed the available stock. The prioritizing of who will be getting the goods is determined by which orders are first released!

Internal Stock Transfer

A stock move takes place when the articles are moved internally between 2 locations in LogiSoft. A relocation order consists of 2 orders with the same number, but different types, namely a pick and a put-away.

A transfer order can be set up by a LogiSoft user or set up automatically following an automatic replenishment process from a buffer location, another zone or an external vendor.

Release and Transactions

Transactions can be generated at different times depending on the system configuration and set-up. It is usually advisable to generate the transactions as late as possible in relation to when the order is to be picked, this in order to place as few ties as possible on the warehouse. If the orders arrive well in advance of their picking, there may not even be enough goods in the warehouse to generate transactions for all waiting orders.

Order release with the creation of transactions can happen when:

1. When the order is being released manually. This happens in the release module and is normally the recommended procedure.
2. Automatically immediately when the order is received. This might be the solution for a smaller installation where it may be too difficult to use order release.
3. Automatically using the order delivery date.
4. Using *Tour Management*.

Whenever transactions have been created for an order, it has been *released.* Then it is ready for picking in the warehouse.

Work Processes

The most important processes in a warehouse is:

- Goods Reception of incoming articles.
- Storing the articles in the warehouse.
- Picking the articles.
- Shipping the articles from the warehouse.

Goods Reception

Incoming goods for storage must be registered first and then be directed to the right areas of the warehouse. This is a function which can be skipped in small warehouses, but if there is more than one zone, it may be convenient to have a goods receiving function. In the goods receiving the following occurs:

- The article is registered, typically against a purchase order, which the ERP/Host system has sent to LogiSoft.
- Quantity and quality are controlled.
- The article may be put into a box, stored on a pallet or the like and recorded with a bar code so it is easy to use during the rest of the process.
- For new articles, any product information (master data) not already known will be registered, for example which location type should be used and which zone(s) the article should be stored in.
- If the article can be put away in several zones, it is decided which zones to use. The system will always suggest one, but this may be changed on request.

Put-away is typically more time consuming than picking, and an obvious advantage in using a dedicated goods receiving function is that part of the work is actually moved from the actual warehouse zones, so that put-away can be done as quickly as possible. Not least in vertical lift zones, where put-away can cause a bottle neck, will this be a big advantage.

Storing the Articles.

This is the movement of the article from goods reception to the final storage.

Picking

Picking articles can be done in several ways:

- Order based picking by PDA Used by mobile operators working in static shelving.
- Order based picking by a PC. Used where the operator is stationary, like for automats and flow rack zones.
- Picking without orders in shelving.
- Picking without orders in automats.

Picking strategy

If there is more than one zone and a given order must be picked from several zones, there are several ways to handle this:

- Serial picking.
- Parallel picking.
- Parallel picking without consolidation.

Serial Picking

The order starts in a zone and is passed to the next, including the already picked goods which follow the order around. The order is typically accompanied by a piece of paper or a label.

Advantages:

- There is no need for picking the order from different zones (no consolidation needed).
- Simple to use.

Disadvantages:

- Takes longer time overall to pick as this cannot be done simultaneously in multiple zones.
- More "moving around" of goods, as they are all following the order around the warehouse.
- Bottle necks may arise in consolidation.
- Shark does not always decide which orders are to be picked, which gives less possibilities to optimize the picking.

Parallel Picking

The order is being picked simultaneously in several zones.

Advantages:

- The order can be picked faster as it is treated independently in each zone.
- Independent work can be done in the various zones. Which means that you don't have to wait for the order to be picked in another zone.

Disadvantages:

- The articles making up an individual order must be gathered (consolidated) from the different zones. This is an extra work process.
- There is a need for an order consolidation in order to bring the articles from the various zones together.
- Requires more administration as you must make sure that all zones are working in parallel.

Parallel Picking without Consolidation

The disadvantage of order consolidation when picking in several zones at the same time can be avoided by not collecting the order, but instead send the articles individually from each zone.

Advantages:

- The order can be picked faster as it is treated independently in each zone.
- No need for consolidating and sorting of the goods.

Disadvantages:

- Shipment is sent in several packages.
- Bad utilization of shipment boxes.

- Probably greater shipment costs. This, however, is not necessarily so, as goods from the different zones

can, possibly advantageously, be sent by different modes of transportation.

Configuration of Picking Strategy

The picking strategy can be configured using some parameters.

Registry â†' Orders â†' PickingStrategy

Parameters	Value	Notes
UseNewReleaseStrategy	1	Set to 1 for the latest version of release strategi.
General	1/2/3	1: Wise (*), 2: Empty Locations<, 3: Best Fit
WiseBestFit	0/1	
LocationStrategy	Default 0/1/2	0: Fixed, 1: FIFO, 2: Floating

The Wise strategy uses a special concept where each location has an ready type code (1 to 5). This can be used to divide the warehouse into areas, more detailed than zones. Using the Wise strategy the following applies:

- Try to pick everything from one area if possible.
- Search first in area 1, then 2 etc.

Default area types:

1. Fast runners.
2. Automate.
3. Flowrack.
4. Shelving.
5. Buffer.

Consolidation and Shipment

Consolidation is done from a PC read more here.

Replenishment

Replenishment is the proccess of filling picking location from buffer locations.

A simple way to make the replenishment is by the PDA and the replenishment list.

Example of flow-racks filled with goods from pallets just behind.

Using Barcodes

Barcodes may with great advantage be used in LogiSoft, some of the functions using bar codes are:

- Checking whether the right article is being picked by test reading the barcode (either article number or EAN number).
- Checking whether picking is done to/from the right location by reading a bar code at the location.
- Checking whether picking is done to/from the correct order on reading a bar code on the order or the box in which the order is being picked.
- Acknowledging that a function has been completed, for example a pick where the alternative would often be pushing a button or a touch screen.
- In order to activate a pick cart. Scanning the bar code on the cart will automatically activate it without you having to open a special window..
- In order to activate picking into a box or put-away into a box simply by scanning the bar code.
- Special functions such as label printing can also be activated by special bar codes.

The fact that LogiSoft is able to use bar codes to activate special functions is because the bar codes have been *encoded* with special characters, which LogiSoft is able to recognize, thereby knowing that, say, a pick cart and not an article is being scanned. Therefore it is important that it is LogiSoft which prints labels for boxes and pick carts etc., since the bar code would otherwise not contain the right information. Shark has integrated numerous functions for the printing of bar code labels.

User Management

LogiSoft has a system for user authentication and control of user rights.

Logon

When LogiSoft is started, a *logon screen appears.* This can have two layouts picked from the configuration. The standard configuration is showing one button for each user. The button can easily be used from a touch-screen. If the user has been given a password, a password screen is shown, which must be filled out correctly in order to continue.

If there are many users, the buttons are not very expedient, and instead you may choose that you need to write a name and eventually a password in a dialogue shown when pressing "login".

It is also possible to logon by scanning a barcode. Two methods are supported:

- LogiSoft prints a special barcode for each user, the barcode has encoded information including password that allows immediately logon by scanning the barcode.
- A special barcode will open the login dialog, from where another barcode with user id can be scanned. This is a simple way to scan an employer card without the need of a keyboard for login.

A third option is to use an access card in combination with a card-reader (typical connected as a keyboard device to the PC using USB). The code of the card can be recorded in the user setup screen and later be detected, when the card is read.

Create Special User Groups

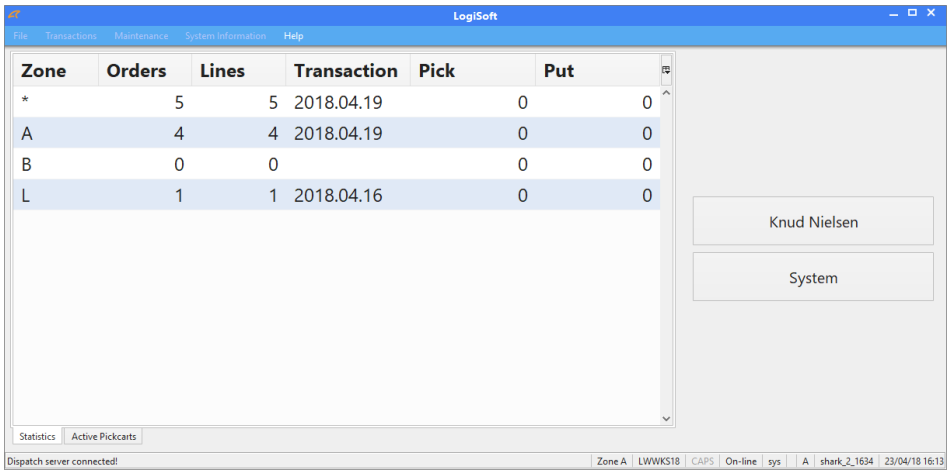
It is possible to define special user groups with dedicated user rights.

Restricting access to certain trays

Feature used to control who can pick and store from specific trays in automats. Trays can be restricted so only some users are allowed to retrieve the trays.

Auto Logout

The LogiSoft PC client can be configured for auto logout after a certain idle time.


LogiSoft
File
Transactions
Maintenance
System Information
Help
Zone
Orders
Lines
Transaction
Pick
Put
* 5 5 2018.04.19 0 0
A 4 4 2018.04.19 0 0
B 0 0 0 0
L 1 1 2018.04.16 0 0
Knud Nielsen
System
Statistics
Active Pickcarts
Dispatch server connected!
Zone A
LWWKS18
CAPS
On-line
sys
A
shark_2_1634
23/04/18 16:13

LogiSoft PC Client

The LogiSoft Windows PC Client is a standard Windows program started and downloaded from the LogiSoft Web server.

Goods Reception

Incoming goods for storage must be registered first and then be directed to the right areas of the warehouse. This is a function which can be done without in small warehouses, but if there is more than one zone, it may be convenient to have a goods reception function. In the goods reception the following occurs:

- The article is registered, typically against a purchase order, which the ERP/Host system has sent to LogiSoft.
- Quantity and quality are controlled.
- The article may be put into a box, stored on a pallet or the like and recorded with a bar code so it is easy to use during the rest of the process.
- For new articles, any product information (master data) not already known will be registered, for example which location type should be used and which zone(s) the article should be stored in.
- If the article can be put away in several zones, it is decided which zones to use. The system will always suggest one, but this may be changed on request.

Put-away is typically more time consuming than picking, and an obvious advantage in using a dedicated goods reception function is that part of the work is in fact moved from the actual warehouse zones, so that put-away can be done as quickly as possible. In particular in vertical lift zones, where put-away can cause a bottle neck, this can be a big advantage.

In the Goods Reception module the items received are registered when a purchase or put-away order already is available. The items are unpacked, counted, and possibly stored in barcode marked boxes.

When an item is *received* it is also decided when exactly and where it is to be put away. Therefore, one or more Put Transactions are created in the system, one per order line when all items on the order line are heading for the same location, otherwise one transaction for each location.

A LogiSoft code is assigned to a given transaction. This can either be a *box number* or a *serial number* generated by LogiSoft. The box number can for instance be a barcode on a pallet, a box, or any other place used for transportation of the item. The number can be used to begin the put in the given zone in an easy manner where all you need to do is scan the barcode.

When you have chosen where to put an item, the master data are taken into use. This includes a "refill information" that specifies in which zones the given item can be put.

Configuration of the Item Receipt module is described under:

Navigation

Keyboard hotkey: F7

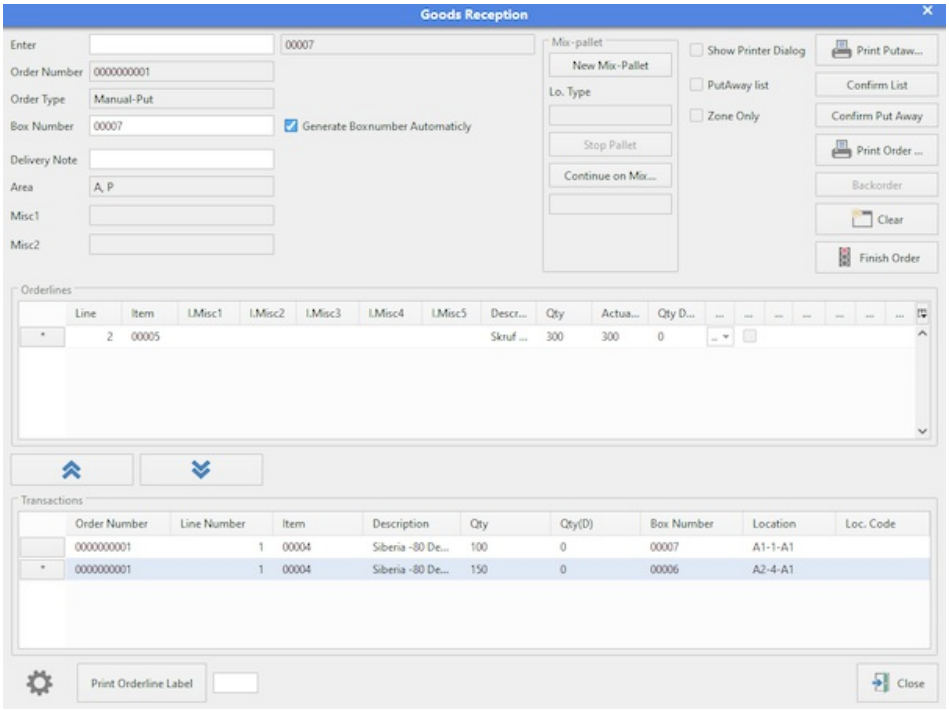
Menu: Transactions -> Goods Reception

Typically, the module will be used from a PC that is only used for goods reception. Therefore, the goods reception screen is always open and ready for use. However, it is also possible simply to do goods reception directly in a picking zone or from any other PC that has LogiSoft installed.

Functionality

Nearly all functions can be reached from a window that shows one active order at a time. You can shift

between multiple orders if necessary.



Enter: General typing/barcode scanning field. When a box number barcode is scanned the active box number will be updated. When an order number is scanned the active order number will change. When an article number is scanned, all the purchase orders in which the given order figures are shown. From here, relevant purchase orders can be chosen and thus, it is not necessary to know the order number.

Order Number: The active order number.

Order Type: The type of the active order.

box number: The active box number.

Delivery Note: Option to add a delivery note number.

Generate box number Automatically: If you do not use boxes, this field must be ticked - LogiSoft will then automatically assign a box serial number.

Orderlines: Order lines in the active order that have not yet been registered. If you double-click an order line, Transactions are created for the Line and it is moved down into the Transactions window below. Choose the first desired zone in the column ”Zone”, as and if appropriate (only zones where the item is defined are shown)

This is the default columns visible, the actually displayed information can be configured.

- **Line:** Line number either from the Host System or an automatically generated number.
- **Item:** Article Number.
- **Description:** Article description.
- **Qty:** This is quantity requested by the order.
- **Actual Qty:** This is the remaining quantity to received.
- **Qty Delivered:** The quantity already received, including what is put on stock and what is received, but not yet on stock.

- **Zone:** The preferred zone where the articles can be stored if it is possible.
- **Back Order:** Selected if there is one or more pick-orders waiting for this article.

Transactions: Here you find order lines that are registered and are ready be stored for the active order.

Aside from specification of article and number, you will find the box number and the location at which the item will be put. The following information will appear:

- **Order Number**
- **Line Number**
- **Item**
- **Description of the item**
- **Qty:** The quantity for for this transaction. The quantity can be changed in case the actual quantity is smaller og bigger
- **Quantity (L):** Total Quantity Delivered. Meaning the quantity that is already put on the order. Relevant for orders in progress
- **Box Number:** The number of the box in which the item is registered
- **Location:** The location at which the item will be put

If you wish to recall a single transaction, typically in order to change the data and find a new location, you can double-click the transaction to move it up as a pending Orderline.

[PRINT]: Print a label that can follow the item. A label format must be defined and naturally, a printer must be connected for the function to work.

[CLEAR]: Restart on a new order. Deletes the data entered in all fields.

[REMAINDER]: Gives access to picking orders that await the item that is being put away. This function allows you to save an actual put for an awaiting order that takes both time and labour when the entire lot is to be picked anyway.

[Cursor key up]: Recall all transactions.

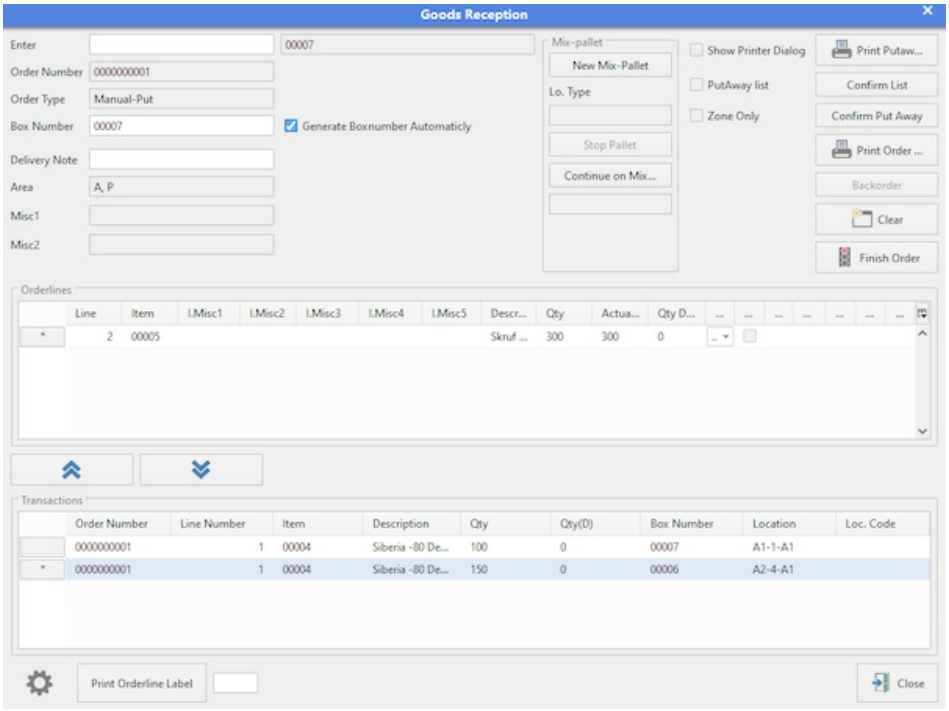
[Cursor key down]: **Create transactions for all orderlines.

[Close]: Close window.

Reception of articles using boxes

Procedure for reception of articles that are to be put away using a box.

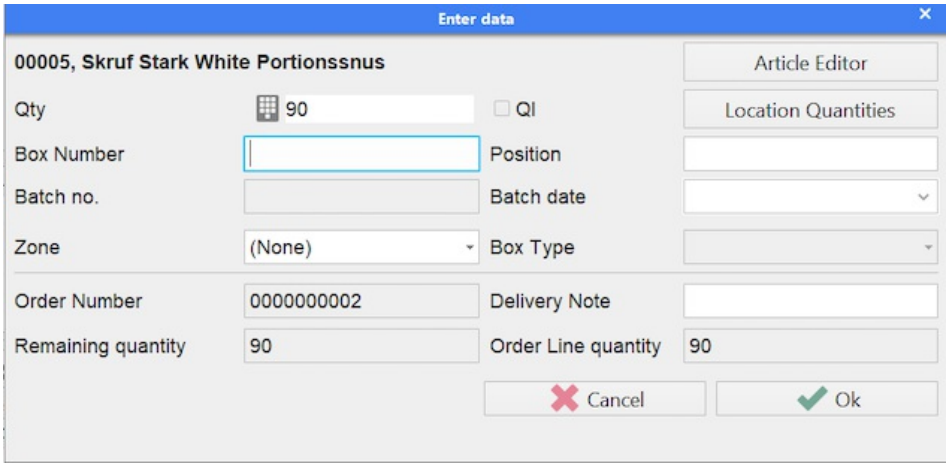
- Unpack the items.
- Scan the barcode on the box in which the item(s) is/are to be put.



Type order number or find the order via an article number. If there are multiple possible orders, choose from the menu shown below. View all awaiting purchase orders by typing new line into an empty field.

The Orderlines for the selected order are now displayed. Now, choose which line is to be received. Do this by:

1. Double-clicking the line for the item that is to be put in the selected box.
2. Typing/scanning item number, EAN code, or alternatively item number.



The line will now "jump" down to the transaction list showing where the item is to be placed. It is then possible to change the quantity of received items in case the delivery in question consists of multiple parts. Edit the content of the field "Quantity" and press "enter" to confirm. At this point, a new Order line will be

created with the missing number. This can later be used for reception of the remaining items.

Keep choosing lines if you wish to put more lines in the same box.

Switch box by taking a new empty box and scan its barcode.

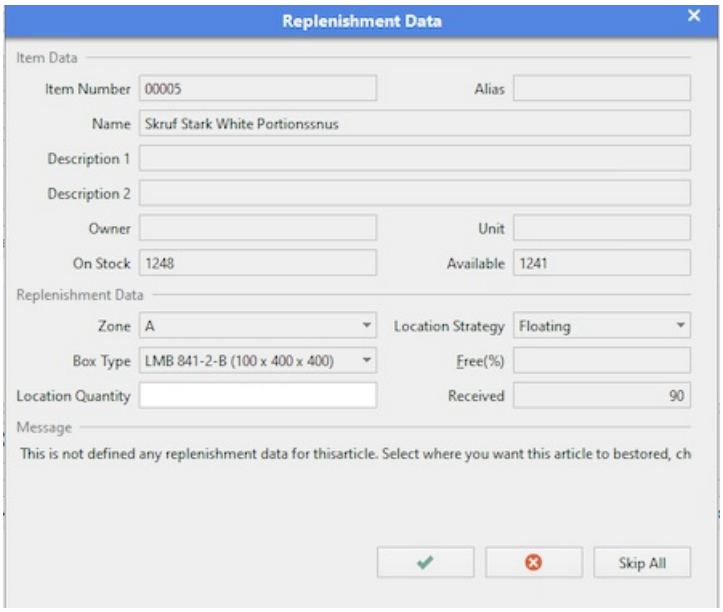
How to

Receiving articles without a fixed box numbers

See ”Reception of items with box”. Note that “Generate box number automatically” must be ticked, allowing for LogiSoft to generate a box serial number that can be printed as a barcode on a label. The box serial number can be entered, using a barcode scanner, on the Floating batch pick screen, if so desired.

Articles without defined master data

When receiving articles that have never before been stored, basic information about placement of the given article in the stock is needed. In these cases LogiSoft will show a dialog, prompting you to type in the basic information:

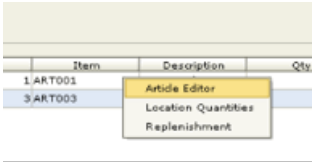


Here, you can choose the zone and the type of location, at which you wish the item to be stored. You can also state how much space is available at the desired location type. If no value is stated, a very high one will automatically be registered.

Changing of Master Data for the article

It will in many instances be expedient to change the master data of a specific article, while stowing it away, as this is the first point at which you encounter the item in a put-away situation and therefore also the point at which you can decide where and how it should be stowed. Therefore, a shortcut has been provided, that leads to the Master Data in the Article Editor. This can be found by right-clicking with the mouse on the order line, at which point you can choose to open the Article Editor or go directly to the Location Quantity screen, which

defines the maximum quantity of the article in question, which will fit onto a given location type.



Cross-docking

Cross docking means moving the goods directly from goods reception to shipment. It means reduced handling of the material and no storage requirement. Two types of goods reception exists:

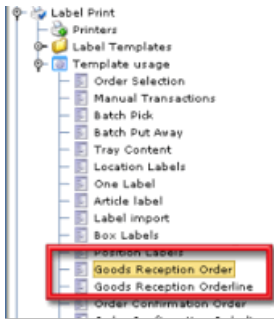
- The purchase order (inbound) is directly linked to the sales order (outbound). In this case cross docking is a requirement. It typical happens when the goods are not on stock.
- There are sales orders with a back order status waiting for the incoming goods. There are no rules, who should have the material first.

In the event that an order is awaiting the article in question it is marked on the Order line in the field ”Remainder” and the button “Remainder” appears. It is then possible to pick directly in accordance with the order, by pressing the button [Remainder]. In this way you save a picking and possibly a put, all the while performing the operation faster.

Use of Picking Lists

It is possible to print putting lists in the Goods Reception screen, if lists in paper format are used. The list follows the articles and is afterwards to be given a receipt, in order to have the put performed.

Printing of Labels

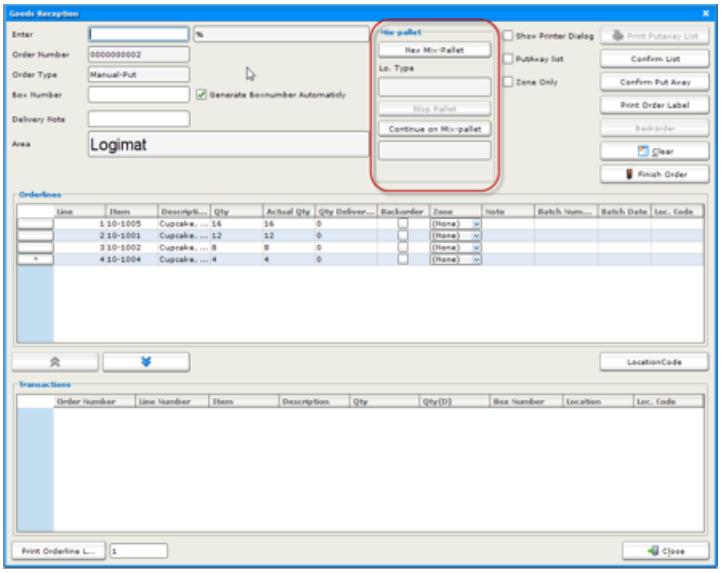


It is possible to print a label, either for each order line or for the ent

Label configuration found under system configuration. The two relevant formats are: ”Goods Reception Order” and ”Goods Reception Orderline”.

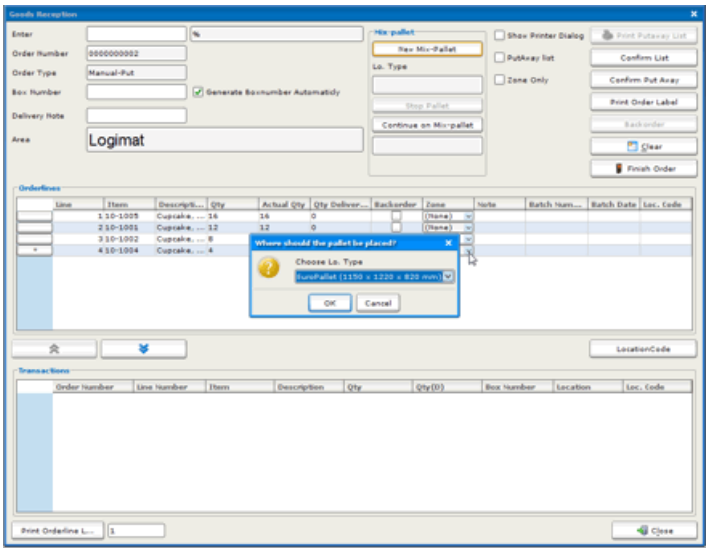
Goods reception of mixed pallets

On the Goods Reception screen it is possible to receive a mixed pallet. The controls for this purpose is located in the Mixed Pallet panel.



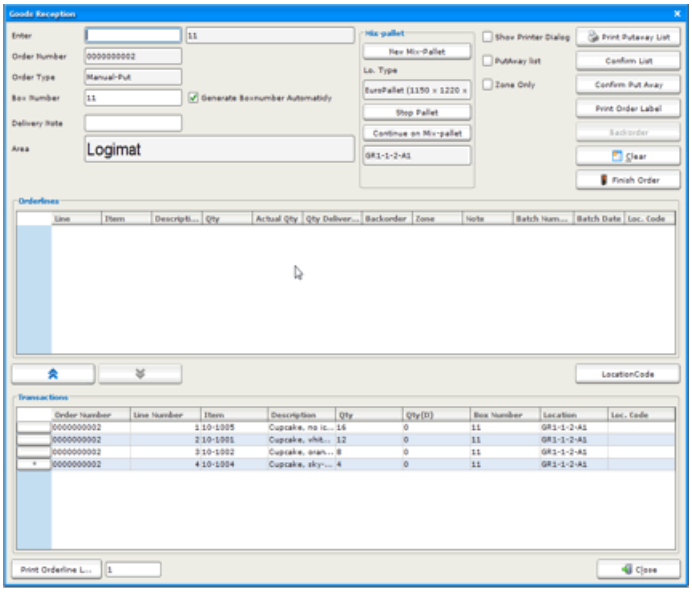
Using this feature, all transactions will target one and the same location, which must be an empty location, configured as a multi-location.

In the course of the reception of the mixed pallet, you will be prompted for a location type to be used for the stow-away of the mixed pallet. Be sure to choose a location type of which at least one empty multi-location exists.



When all order lines have been processed into transactions, the Goods Reception screen will show the

transactions like this. Note that the same location is to be used for all the transactions.



Quality Inspection

Sometimes it is required to inspect the quality of received goods, before they are released for picking. It is possible in LogiSoft to mark an inbound order line with a *quality inspection* flag (QI) to inform the warehouse, that inspection is needed for this specific purchase.

When receiving with the QI flag, the received goods will be stored in a "locked location", which means it cannot be released for normal picking. The location can be anywhere in the warehouse, but typical it is convenient to have a separate area (zone), to be used for items that requires inspection.

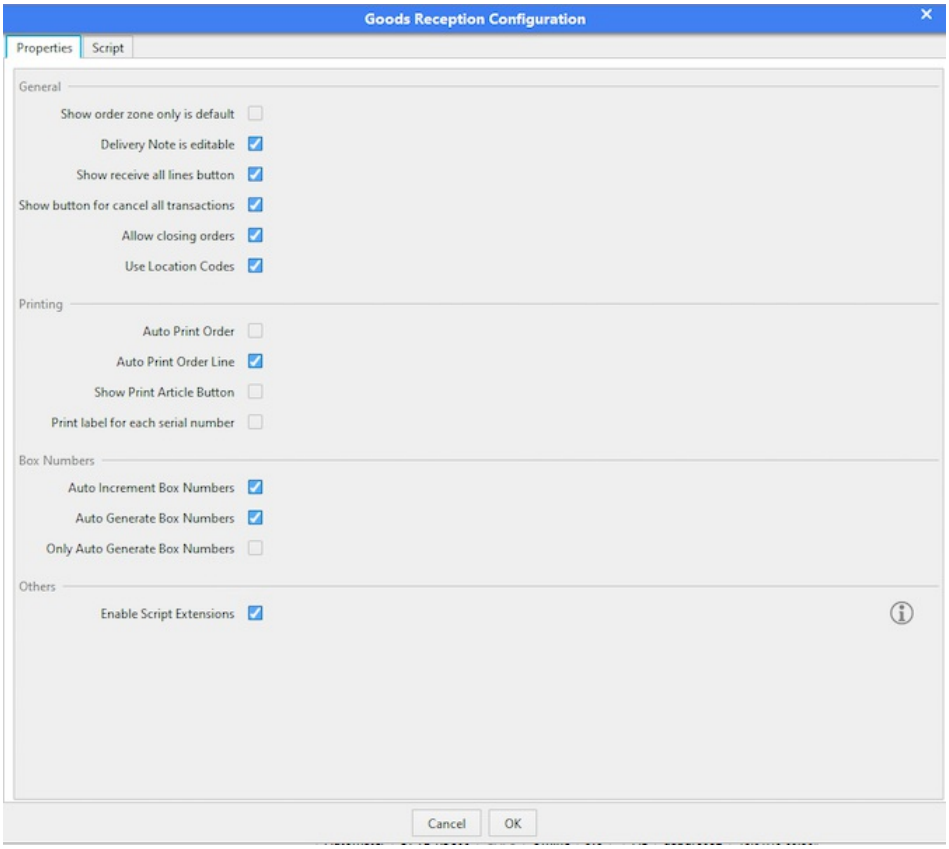
To release the items from inspection, it can either be moved to a final location. The QI flag will not follow the item when moved, or the flag on the location can be removed (for example by the Article Editor).

Configuration

Th Goods Reception can be configured in different ways.

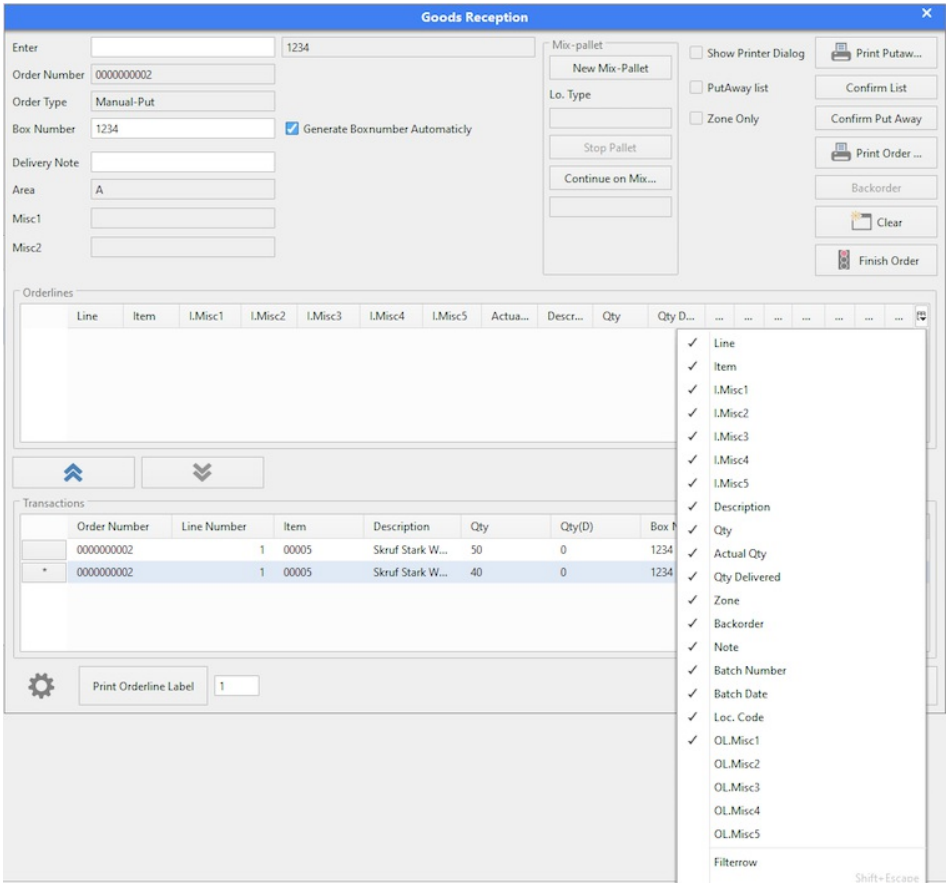
General Configuration

The Goods Reception window can be configured in different ways using the configuration menu.



Changing the displayed columns

What information is required to be visible various among users. The displayed columns can be selected by clicking the upper right corner of the table.



Interpretation of GS1 Barcodes

There is a configuration parameter called "Interpret GS1", if that is activate the enter field will interpret the input as a GS1 barcode if possible. Only a limited number of codes are supported:

Data Type	GS1 code	Notes
GTIN	01	
Batch Number	10	
Expiration Date	17	

Order Picking and Put-Away

The typical way of using batch-picking is by choosing a number of orders and then finish picking them before starting the next batch. LogiSoft has a variant for automated warehousing called floating batch picking, where orders can constantly be added and removed from the batch when picking has been completed. With this technique, you have the advantage of always working with a batch of optimum size, thus avoiding that the last part of the batch with only a few lines left unfolds less optimally.

Picks and put-away can be mixed or kept separate depending on the preferences of the user.

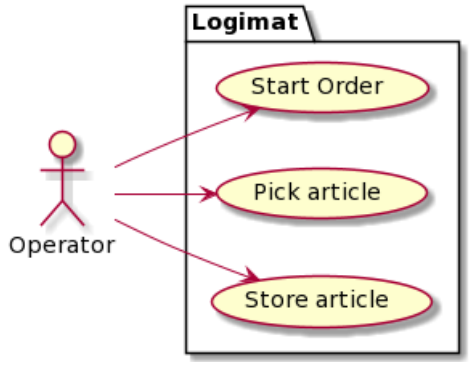
This function is often used together with automats, but it can also be taken to use in other situations where one or more screens in fixed locations can be used in connection with picks in a zone.

There are a number of configuration options, all of which are described under the configuration section.

LogiSoft supports different strategies for which orders are entered into a batch. Which method is best will depend on how the warehouse is organized as well as how the processes are in general:

- The operator will choose which orders are to be picked, either directly from a list or by scanning a bar code with the order number.
- LogiSoft chooses which orders ought to be picked in a vertical lift zone. You typically pick to boxes having a bar code.
- LogiSoft chooses which orders should be picked, and articles are picked into a pick cart.

{% if site.development %}



{% endif %}

Order Selection

The order selection window is used to choose which orders that are to be picked or stocked.

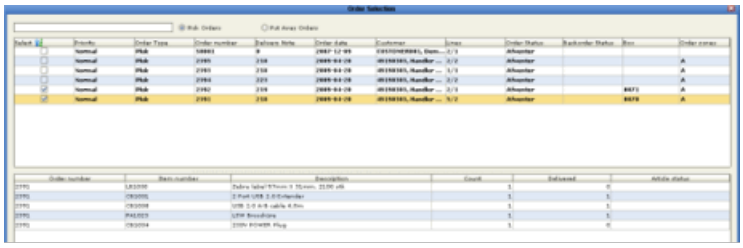
To start an order it must first be *released* for picking or *goods received* to be stored. If a outbound picking order is selected, that is not yet released, it will happen automatically.

> When an order is selected and it is automatically released, it will not necessarily be released for the current zone where the order is selected. Depending on the selected visibility of orders, it might disappear because it is released for another zone.

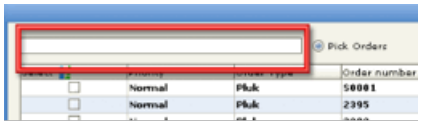
Read more about releasing of outbound orders here

To select one or more orders

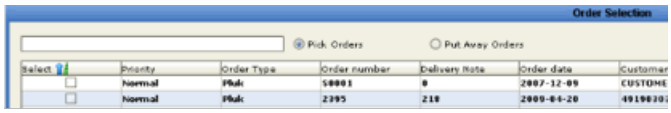
The order selection screen is opened. The screen is mainly made up of two lists; the one on top is a list of all open orders within the system. The one on the bottom lists the Order lines chosen, in order to provide a neat overview of what is activated.



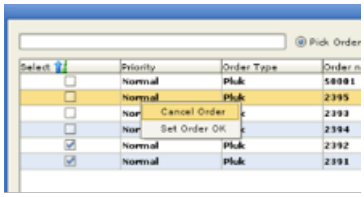
The field Order Number: In the top left corner you find a field into which an order number can be typed. In case there are many orders this is the easiest way to find a desired order. Typically, however, this is used in connection with a barcode scanner for fast look-up of a desired order.



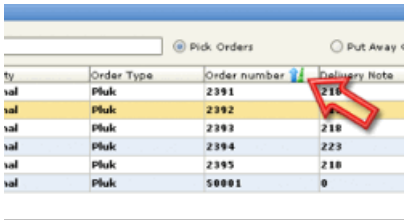
Selection of Order Type: Here you are to choose whether you wish to view picking or storage orders. It is possible to choose both storage and picking within the same batch.



Changing of Order Status: It is possible to mark an order with either ”OK” or ”Rejected” when it has not been run through. This is done by right clicking with the mouse on the given order and choosing the desired status. This is used when you - for any reason - do not wish to run an order through. If LogiSoft is coupled with a hosting system, a note will be returned specifying the status and the actual number of stocked/picked items.



Sorting of Columns: It is possible to determine the order of the orders. This is done by clicking on the desired sorting column. Click twice for reverse sorting.



Order List:

[Choose]: Click here to activate the order.

Priority: The priority of the order.

Order Type: LogiSoft can operate with many order types, for instance sales orders, production orders, return items, etc.

Order Number: The order number.

Delivery Note: Delivery note number.

Order Date: The date of order. This will mostly be the date of delivery but can also be the date on which LogiSoft received the order.

Client: The client's name.

Lines: Displays the quantity of lines / remaining lines.

Order Status: The status of a given order.

Remainder Status: Shows whether there are remaining items or whether there has been a remainder situation connected to the order.

Box: If the order is connected to a box, the boxnumber will appear here.

Order Zones: Shows the zones in which the given order is to be picked. If no zones are stated and the order is open, the order has probably yet to be released.

Work with barcode scanner only

To close the Order Selection Window without pressing the key, make a barcode that contains "OK". Scanning this barcode will close the window automatically. This can be combined with the "AutoOpenOrderSelection" attribute, to work only with the barcode scanner.

How to Confirm Picking and Put-Away

Each transaction must somehow be confirmed; this can be as simple as pressing the enter key or the "Accept" button on the screen or by confirming a number of values.

The confirmation strategy is a global setup for all PCs.

Open: *Maintenance -> Order Settings -> Pick and Put-Away Confirmation*.

Here is it defined what should be confirmed when picking or doing put-away. Select "Accept anything" to confim by pressing enter or pressing the key on the touch monitor.

The client must be restarted to activate the changes.

It is possible to make a special barcode that works as a "accept anything code".

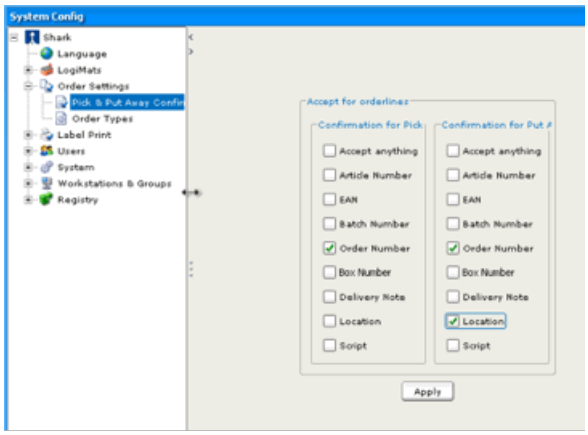
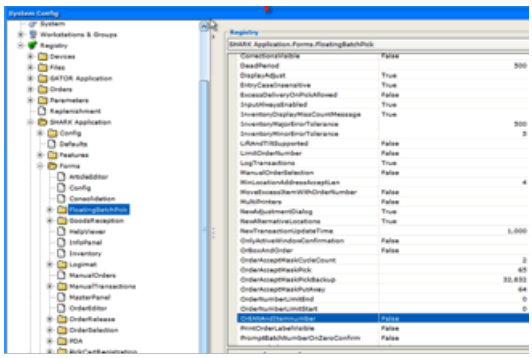


Figure 1 - Configuration of confirmation strategy.

Some special features can be set using the System Configuration panel.



Parameter	Value	Description
OrEANAndItemNumber	true/false	A flag is available for confirmation of either article or EAN number
ConfirmAllBoxNumbersMask	String	This is a (bar)code that can be used to confirm any box number. Default is *9999*.
ConfirmAllLocationAddressMask	String	Code that can be used to confirm any box number. Default is *7777*.
ConfirmAllItemNumbersMask	String	Code that can be used to confirm any box number. Default is *8888*.

Batch pick with pick cart and vertical lifts

Picks are always made to boxes, where the box has a unique barcode identifying the box. The box and the barcode may either be reused again and again, or a specific label can be printed for each pick. The former is used when picking to standard boxes, which will be repacked later, while - if picking to boxes sent directly to the customer - a label will be printed and attached to the box.

What then, is the advantage of using a picking cart? The cart is best utilized when picking in several zones. Here a pick cart can be started up with a number of orders in one zone and then driving the cart through all the zones while picking what needs to be picked in each single area. Once the cart has been registered, then afterwards you only have to cancel/record the cart in each single zone in order to start picking to all the boxes on the cart, meaning that you do not have to start every order separately. Recording and cancelling a cart is done by simply scanning the cart's bar code.

A pick cart consists of the following:

- The pick cart has a *pick cart number,* which is normally a bar code.
- The pick cart has a number of *positions,* where each position has a number. The position number is composed of the pick cart number and the actual position. Thus, if pick cart 4 has position 3 (3 space) it will be called 04-03.
- At each position there is room for a pick box, this box will also have a box number.

Pick carts can be more or less "smart", some having marker lights and acknowledgement buttons with wireless technology, thereby giving LogiSoft direct control over the cart, others are more simple, using only bar codes.

Almost all operations in the following, are done from LogiSoftS *batch pick screen,* if picking is done from vertical lifts, but picking can also be done from PDA's or with paper pick lists.

Before start

Where wireless pick carts are being used, you should make sure the cart is ready for use. Which means that the batteries are fully charged and that it is on the "the network". If the cart has just been turned on (removed from charging) and has not yet been used, LogiSoft will blink the first lamp on the cart to indicate that the cart was found. Push the button to turn it off or leave it, until it turns off by itself when you finish using the cart.

The first lamp on the pick cart will blink when LogiSoft *has "found" the cart.*

Starting up and registering a pick cart

When a pick cart arrives it must be registered in the zone. This is done by scanning its bar code.

Canceling a pick cart from a zone

If you want a pick cart to be cancelled from a zone, it may be cancelled before it is finished. This is easily done by again shooting the cart's bar code.

Picking

It is quite simple to pick articles into the cart. The screen picture gives clear guidelines.

Batch picking using pick carts and PDA

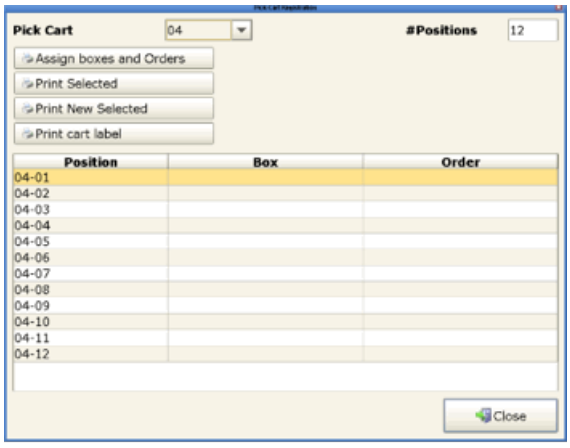
The following describes how work is done using pick carts and PDA's in rack or pallet warehouses. When picking using this method, LogiSoft selects the next order for picking.

Picking is always done into a box with a bar code with a unique bar code label to identify the box. If the box is a reusable container, the label is also reused. Alternatively, a new label can be printed every time on a label printer when picking into boxes, which are transported directly to the customer (pick-and-pack).

Recording the order on the pick cart

Before starting, orders must be recorded to the pick cart. This is not possible with the PDA, but must be done on a PC with a bar code scanner and with LogiSoft installed.

The pick cart registration is done with the function below.



Screen picture for registration of pick carts.

Batch pick

The actual pick is done through the PDA terminal, which continually shows what needs to be done.

Unregistering of a pick cart

If for some reason, a pick cart needs to leave the zone before all picks are completed, it must be unregistered. This is done the same way as the recording, on a PC by again reading the bar code on the cart.

Floating batch picking with flow racks and vertical lifts

This section describes how batch-picks are performed with flowracks and vertical lifts.

What is in the following called a flowrack, can also simply be a table or another place which can be marked with a bar code.

Picks are always made into pick boxes having a unique bar code.

Every track on the flowrack has a unique position number, which is a special bar code. Alternatively, there may be light and an acknowledgement button installed, thereby avoiding having to acknowledge with the bar code scanner.

All ensuing operations take place from LogiSoft's batch pick screen. Refer to Error: Reference source not found for further information on its practical use.

When working in this way, LogiSoft chooses the next order for picking. Thus the prioritizing and releasing of orders are important, since they are the mechanisms controlling, which order is the next to be picked. Only released orders can be picked!

Generally the following applies:

- You can have one order in each case.
- If the order cannot be in one box, you may continue with a new one as long as this is necessary.
- You may, if necessary, cancel one box before it has been completed.

Working procedure

The following procedure is applied:

- LogiSoft's batch picking screen must be open.
- When you want to start a new order, take an empty box and place it on a track in the flowrack.
- The bar code on the flowrack (the position) is scanned. LogiSoft shows a registration screen in reply.
- The bar code on the box is then scanned.
- LogiSoft now assigns the order to the box and the pick is started.

A typical flowrack, here with marker lights and acknowledgement buttons. However, you may always use the mounted bar codes in case of problems with the hardware.*

Batch pick from order forms

This is the most simple batch-picking method. It is the operator who chooses the next order to be picked, and no pick boxes, carts etc. are used.

Before picking articles, the order must be *released.* Refer to "Order Release" for more information on this. The system may be configured for automatic release when the order is imported, or when the order is picked on the *Order Selection* screen (see section Error: Reference source not found).

When picking in batches, the articles must be distributed to the right orders. As the order of the picked lines is not in order sequence, it may take time to find the right order. You can therefore use *position labels,* for which a number of fixed positions are set up, where a special bar code label is placed with a position code. The code can be very short and easy to find, for example A01, A02, A03, etc. When an order is activated, it is linked to the position code, and the screen will show the position so that the order is easy to find, so that the picked items can be placed with the order. LogiSoft has integrated functions for printing position labels. It is most optimal having a bar code with an order number available for this function to be used. Otherwise the order number must be entered manually.

Work procedure - simple

- The batch pick screen in LogiSoft is open.
- Open the order selection screen (you may use F3). You do not have to close the batch pick screen first.
- Select the order, either from the shown list of open orders or by entering or shooting a bar code with order number.
- The order is initiated and ready for picking.

Procedure - With position codes

- The batch pick screen in LogiSoft is open.
- The operator scans a position code and LogiSoft opens an order registration screen.
- The bar code on the address sheet is read.
- The order is initiated and ready for picking.

The Pick Window

Navigation

Keyboard: F8

Menu: Transactions -> Batch Picks.

Touch Screen: Large button on the login screen.

The batch-picking screen is designed so that it can be viewed from a long distance and can be controlled by a touch screen.

What is to be picked (on top):

Green arrow out / red arrow in: A green arrow-out marks that a pick is to be carried out (items going out of the stock). A red arrow-in, marks a put-away, meaning items are going into the stock.

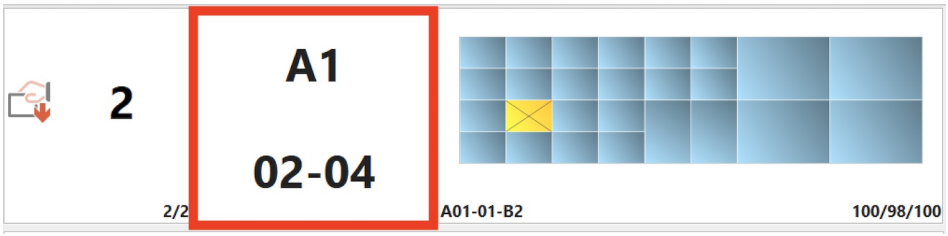
Quantity: The quantity that is to be picked or stored is shown as the big numbers. This will often be identical to the number on the order line but in cases of picks/puttings spread over multiple locations the number can be smaller.

The Quantity is shown in red if the quantity before the transaction is 1. *This means if you are picking and the number is red, the location should be empty after the pick!* Opposite, for store operation the location must be empty before anything is stored.

Unit: If a unit or package type is present, it will be displayed below the quantity.

Sub-lot: In the lower right corner is shown, if the line is split into 2 or more lots, this shows the total number of the orderline.

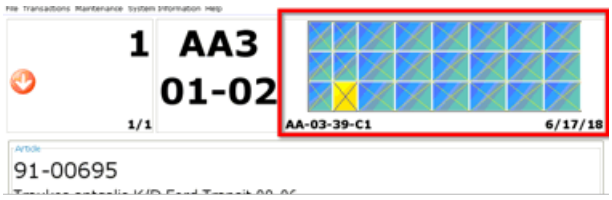
Pick from / to :



Location: Here you find information about from and whereto the pick will take place. Typically, it will be module name (name of automat) that is displayed. If the pick is made for pick boxes or likewise, the position to which the pick is made will also be displayed here. The figure above shows that the pick is from module

(automat) AA3 and it goes to *position* 01-02, which could be trolley 01, position 02.

Tray Location:



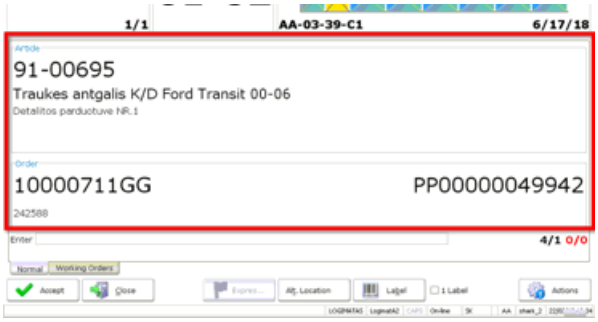
Tray overview: Here you can see where in the tray/on the shelf the pick is to take place. All locations are displayed and the one from where the pick takes place or the one to where the put-away is going is highlighted in yellow.

Full location: By the tray overview you also find the complete location address for the marked location.

Quantities: By the tray overview there is information about the quantity prior to pick or putting. Three numbers are shown: *On location/available total/total quantity.*

On-location is what physical should be on the location before the pick. *Available total* is the total quantity in the system, that is available, this is the total stock minus stock reserved for already released orders. *Total Quantity* is the total physical stock, including the current and other locations.

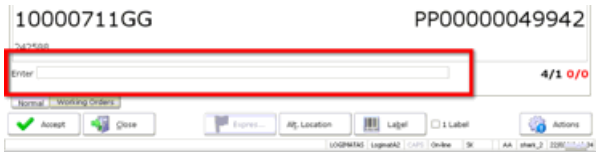
Information about pick or putting in progress



Article: Here you find the article number and a description of the article.

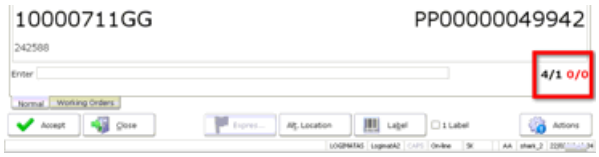
Order: Order number, possibly including further information under the number.

Enter field



Enter: Text field into which the receipt information is written or scanned. If receipt is to made with order number, location, article number etc., the information in question is to be typed or scanned into this field. In case a scanner is used and the code cannot be scanned, the information can always be typed into this field.
Adjusting: Here one can enter an adjusted quantity that is wished picked and put away when one cannot comply with what is suggested by the system.

Batch Information



Batch size: Here is displayed the current size of the running batch of order lines. 2 numbers are displayed: *processed lines/lines left.* The figure shows that this is the line 4 and there is 1 left. Optional some statistic number can be displayed in (in red), this is pick statistics for the last hour.

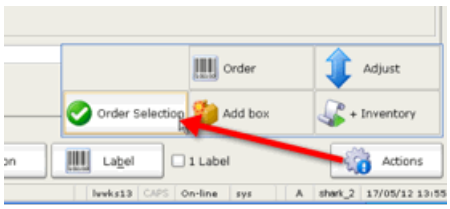
Tab: Working orders:

On this screen one can see which orders are active. It is also possible to delete an active order by unchecking the order and pressing [Apply].

Note: One can define a code that is to be scanned or typed instead of scanning EAN, location, boxnumber and item number in instances where the code cannot be read.

Selection Orders to Pick or Store

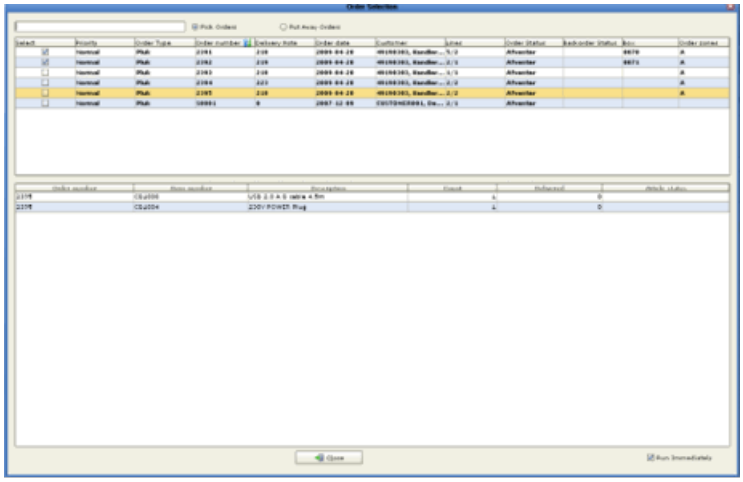
Simple Order Selection



If one wishes to execute a particular order, it is also possible to choose an order manually.

Press [Actions] -> [Order Selection] or F3 to open the *Order Selection Screen.*

Choose whether you wish for the search to be performed by pick orders or put-away orders. Choose the order either by ticking off the *select* field next to the order, by writing the order number in the typing field, or by scanning a barcode with the order number.



Tips:

One can click on an order and view the affiliated orderlines. It does not mean that it is selected, as it is only an opportunity to view the content of an order before it is selected.

Click in the column names in the order list to have the list sorted by that particular column. Click once again to reverse the sorting.

If a touch screen is used it can be advantageous to increase the line distance of the order screen. This can be done under System Configuration.

Execution of User-determined Orders (With Position Codes)

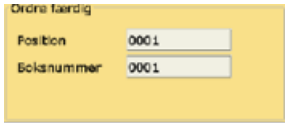
- The batch picking screen is open.
- The operator scans a position code and LogiSoft opens an order registration screen.
- The barcode on the order note is scanned.
- bThe order is initiated and the picking can continue as usual.

Batch Picking with Boxes

The standard procedure is for LogiSoft to determine which orders are next in line for execution.

1. Scan a position label (barcode of a run-through shelf, a pick cart, or another location)

1. LogiSoft opens an Order registration window.
2. Scan a boxnumber, either on a put-away box on which items have already been registered (via the item receipt) or on an empty box that can be used for picking of an order. LogiSoft chooses and activates the order and includes it in the group of orders (batch) that are active. If an order is complete the following



   window will appear:
3. Scan the box once more (to confirm that the handling of box has been completed) and remove the box.Repeat the procedure for a new box (go to step 1)

Batch Picks with Positions and Orders

This procedure assign each order to a position, no boxes or pick cards are used. The idea is that when multiple orders are picked in parallel, the operator does not have to search for the order number, but can use the position number instead.

1. Scan a position label (barcode of a run-through shelf, a pick cart, or another location)

LogiSoft opens an *Order registration* window.

1. Scan an ordernumber to start the order.

Deselect an Active Order

One can deselect an order that is in progress. This will immediately disrupt the picking and the order will be in a "partly picked" status and can then be completely picked later on.

Pick the Order in Multiple Boxes

If picking is carried out for a box and the box is full it can be necessary to "switch" box. This is done as follows:

- Remove the fully loaded box.
- Scan the position.
- Scan a new, empty box.

The picking will now be carried out for the new box.

Undo Picking For a Box

If one wishes to remove a box with a given order from an active batch, this is done as follows:

- Scan the position of the box.
- Scan the barcode of the box.

Thus, the same procedure as for choosing a new order for an empty box.

Handling Deviations

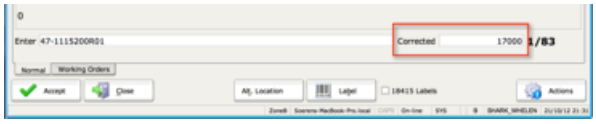
If all data is correct and the work flow is as planned, there is no reason to deviate from what LogiSoft tells, but in praxis it can be required to make changes to the picked or stored quantity or the suggested location. There are a numbers of ways to handle situation, where the requested operation cannot be fulfilled.

Adjusting the Picked Quantity (simple)

The simple quantity adjustment allows for the picked or stored quantity to be adjusted, simply by entering the value in a field. It requires the configuration parameter *CorrectionsVisible=True* and *CorrectionEnabled=true.*

- Enter the corrected quantity.
- Confirm the normal way in the "Enter" field.

The corrected quantity must be less what is available on the location.



Adjusting the Picked Quantity (advanced)

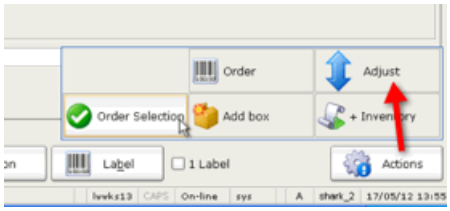
There can be various reasons why it is not possible or desirable to pick the requested quantity. For example:

- There is a stock error, so it is not possible to pick enough from the location.
- The quantity must be adjusted to what is possible or practical to pick.
- Late changes to the order.

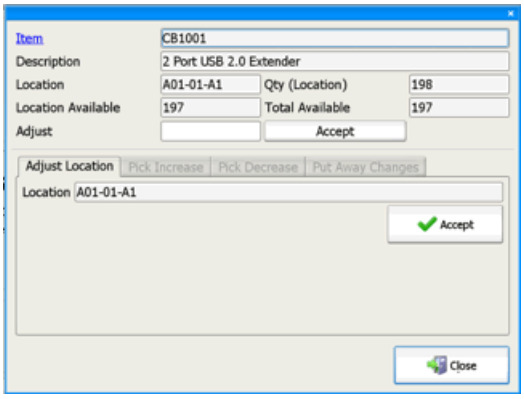
The following requires that the configuration parameter *NewAdjustmentDialog*=True (False is used for backward compability).

Press [Actions] -> [Adjust]

This will pop up:



To change the quantity picked enter the quantity in the "Adjust" field and press [Accept]. This will enable the tabs:



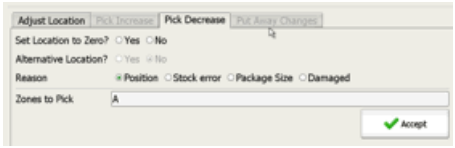
Select now either to adjust the location quantity or to adjust the quantity to pick.

It is also possible to specify a reason for the correction.

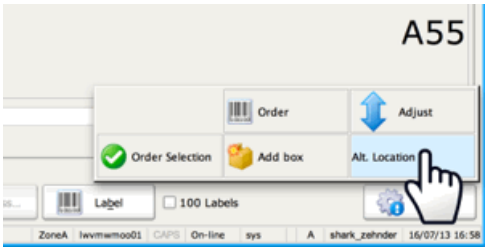
Changing of Suggested Put-away Location

To select an alternative location for storing goods:

1. Select the Alternative Location dialog.



2. Select the location.



Changing of Put-away Quantity - insufficient space at location

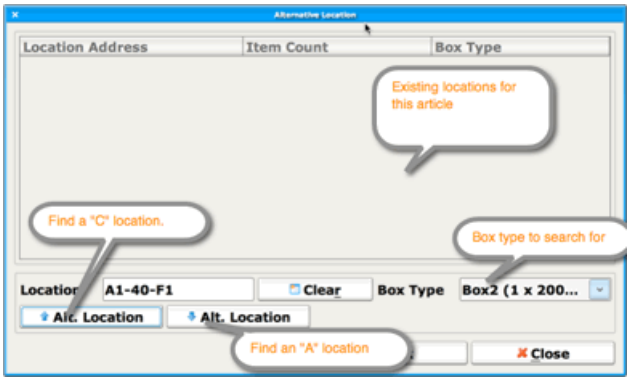
In case the location does not have the space necessary for the quantity suggested by LogiSoft , do the following:

- In the ”Adjusted” field, type the actual quantity put-away.

- Make receipt as usual.
- A menu is shown saying "New Location Wanted?" Answer "Yes".
- A menu is shown allowing for selection of a new location. Select location.
- A new put-away of the remaining items is being executed. The entire procedure can be repeated if space is still insufficient.

Note: It is not given that the put-away of the remaining items will be executed immediately after. If another orderline is faster to put away, then that one will be chosen first!

Dialogue screen for selection of alternative put-away location:



The list shows the existing locations. If desired, select one of these (click the line) and press OK to close the dialogue.

1. If a new location is wished for, choose box type.
2. If a new location is wished for in a specific area (e.g. tray or automat), write part of the address (e.g. A1-5 for a location in automat A1, tray 5). It is also possible to write the full address.
3. Choose "Alternative location" using the cursor keys up or down. This will either return a location for frequently picked items or location for low frequency items.
4. Press "OK" when the location is selected.

Changing of Put-away Quantity - Not Enough Items

If there are not enough items for the order line, do as follows:

1. In the "Adjusted" field, write the actual quantity put away
2. Make receipt as usual.
3. A menu is shown saying "New Location Wanted?" Answer "No".
4. The order is closed but with the adjusted quantity as put-away. The actual put-away quantity will be reported back to any host system connected.

Changing of Put-away Quantity (Simple)

One can change the put-away quantity by typing the actual quantity in the *adjusted* field. The quantity entered will then be applied and the order will have a *partly picked* status.

It is possible to reactive the order (release) in order to pick the remaining quantity.

Changing of Put-away Quantity (Not Enough at Location)

In case it is impossible to pick the desired quantity, one can go through the following procedure:

1. Press [Adjust]
2. Choose the reason for adjustment (here ”Adjust Location”).
3. Type the actual quantity on the location.
4. Press [OK]
5. Press [Close]

The quantity on the location will be adjusted and the pick will be adjusted to what is actually available. The location will afterwards be empty.

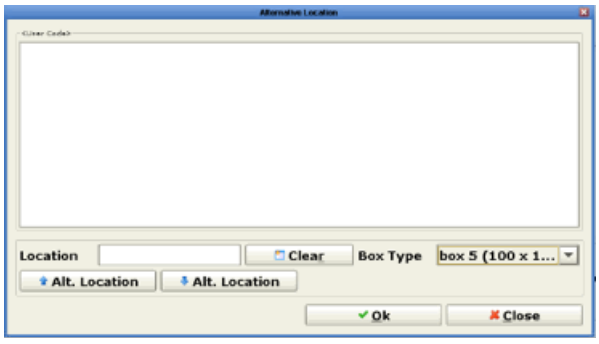
The order must be reactivated to pick the remaining quantity.

Changing of Put-away Quantity (Adjust Put-away Amount)

If one wishes to change the put-away quantity, e.g. if the client in the very last moment changes the order or if the packaging sizes are making the ordered amount inexpedient, the quantity of the order can be changed. Upwards adjustment to an order line is only possible when the system is configured to perform this (set AllowOverCorrectionPutAway=true).

1. Press [Adjust].
2. Choose the reason for the adjustment (here, decrease/increase order).
3. Type the desired quantity of the order.
4. Press [OK]
5. Press [Close]

The quantity on the location will be adjusted and the pick will be adjusted accordingly.



In case the put-away quantity exceeds what is on the location the order must be reactivated in order to initiate pick from another location if possible.

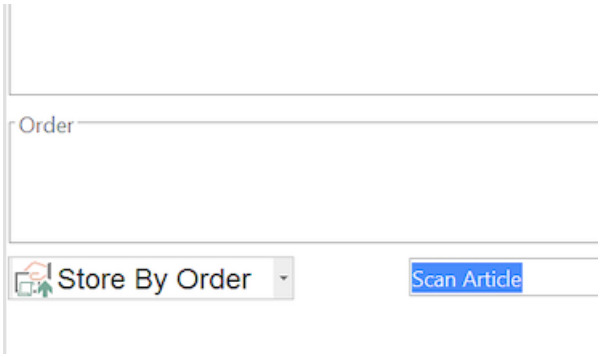
Express Orders

If Express Orders have been defined in the system, the button *Express Orders* will appear when one or more of such orders exist(s). One can then directly press the button in order to disrupt orders in progress and

activate the urgent order(s) that is/are awaiting. Afterwards, the process regarding the previous orders can then be reinitiated.

Quick Store of Articles

A special function can be enabled from the configuration menu that allows easy matching of article numbers with inbound orders without using a goods reception.



Optional select button for quick goods reception and store

Printing Order Labels

To print order labels from the Floating Batch window, the following must be configured:

A label printer must be defined.

A template must be defined to format the label.

The Label Template usage is "Pick Cart Ordre Registration". This setup must be done.

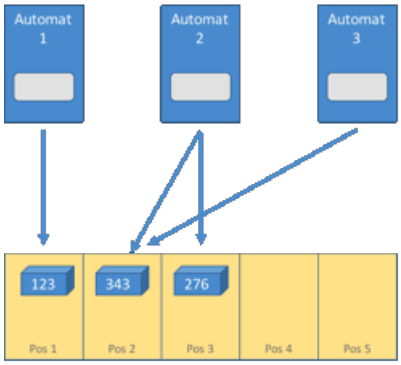
Set the configuration parameter : "LogiSoft Application > Forms > Order Selection > AutoAssignBox" to true (The system requires to order to have a transport box or pallet.

Set the configuration parameter: "LogiSoft Application > Forms > Order Selection > AutoPrintOrder" to true to automatically print an order when it is activated. Set to false if this should be manually.

Picking in Automats to Boxes

In this setup, picking is done to boxes (handling units) that are placed on *positions.*

The reason to register each box/order on a position, is that the operator then don't have to search for the box or order number, when multiple orders are picked in parallel. Instead the screen shows the position, which is a simple index number that is easy and fast to find.



Example on how position and boxes works: Box 123 is scanned to position 1, box 343 is scanned to position 2, box 276 is scanned to position 3.

Step 1

The batch pick/store window is opened.

Step 2

To register an order, **scan a *position barcode***. The box registration dialog will be shown with 2 input fields:

Step 3

Scan first the position barcode.

Step 4

Scan the box number. This will automatically activate the next order in the order queue and assign the scanned box to this order.

Step 5

The order(s) is started and the window get the tray and shows the next operation.

Step 6

The operator picks the items and may confirm by scanning one or more IDs in the automat: article number, location address.

The quantity indicated in the upper left field.

Step 7

The window shows the position of the box/order where the items must be placed.

Confirm for example by scan the box number or order number.

Step 8

Goto step 3 until all items are stored.

Notes:

- The operator may stop and start orders when needed. It improves the speed to have as orders in work at the same time, this makes it easier for the system to optimize speed.
- Pick and put-away can run in parallel.
- The operations are done in the fastest way, all machines will operate in parallel and the operations will be sorted to minimimize delays.

Variations:

- Use Pick-by-light hardware in the Automats.
- Use Pick-by-light hardware for the positions, with a lamp and a push button. Thereby it can avoided to confirm by the scanner.
- Instead of a box, an order number can be scanned. This can for example be a picking list with the order number as a barcode.
- The positions can be placed on a table, shelving or a transportable pick cart.

Process: Order based picking in Automats

Step 1

The batch pick/away window is open

Step 2

Open the Order Selection window to select 1 or more orders to store. Activate from a list, enter the order numbers or scan the order number from a barcode.

Step 3

The order(s) is started and the window get the tray and shows the next operation.

Step 4

The operator picks the item and confirm by scanning one or more IDs: article number, order number, batch number, box number, location address.

Step 5

Goto step 3 until all items are stored.

Notes:

- The operator may stop and start orders when needed. It improves the speed to have as orders in work at the same time, this makes it easier for the system to optimize speed.
- Pick and put-away can run in parallel.
- The operations are done in the fastest way, all machines will operate in parallel and the operations will be sorted to minimimize delays.

Configuration

There are many possible ways of customizing the order pick window.

Choose Order Selection Strategy

Registry > LogiSoft Application > Forms > OrderSelection

Parameter	Value	Description
InstantRelease	true/false	Orders are released automatically when they are chosed. Usefull in smaller installations where order release management is not really needed.
AutoAssignBox	true/false	
DisplayInventoryOrders	true/false	
OrderRefreshInterval	Number	Time in ms between update of orders from the server.
OrderTimeout	Number	Time in seconds until finished orders will disappear.
RowHeight	Number	Height (Line spacing) of the displayed rows. Default is 18.
RunImmediately	true/false	The order will start immediately, when it is selected. This is the default behavior.

Who Choose Order	Use Pick Cart/Positions Method_Configuration	
Operator.	No.	Open the Order Selection Window and scan the order number
Operator.	Positions (Scan a position barcode.	A dialog will show that ask for order number and a box number
Operator.	Pick cart.	Prepare first the pick cart.
Automatically (1)	No	Not possible
Automatically.	Positions.	Scan a position barcode. A dialog will be shown that ask for a box number.
Automatically.	Pick Cart.	Prepare first the pick cart.

Notes:

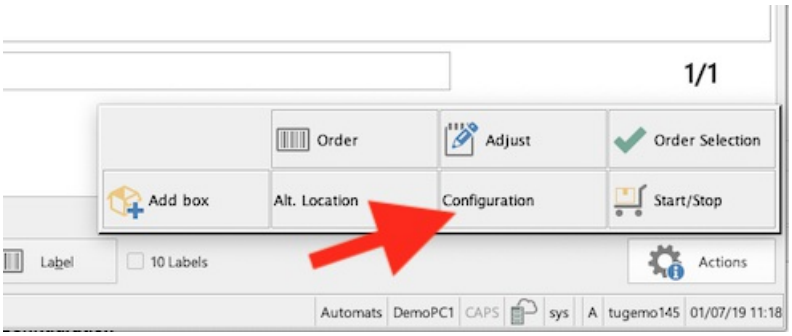
(1) Automatically means LogiSoft choose the next order to pick. The order is given by order priority and the delivery date, other criteria's can be used as well, but this might requires some rules to be defined. The order must be released to be selected automatically.

(2) A position is a special barcode with a position name. It is used as a fast way to find the order and for confirmation, when multiple orders are picked in parallel.

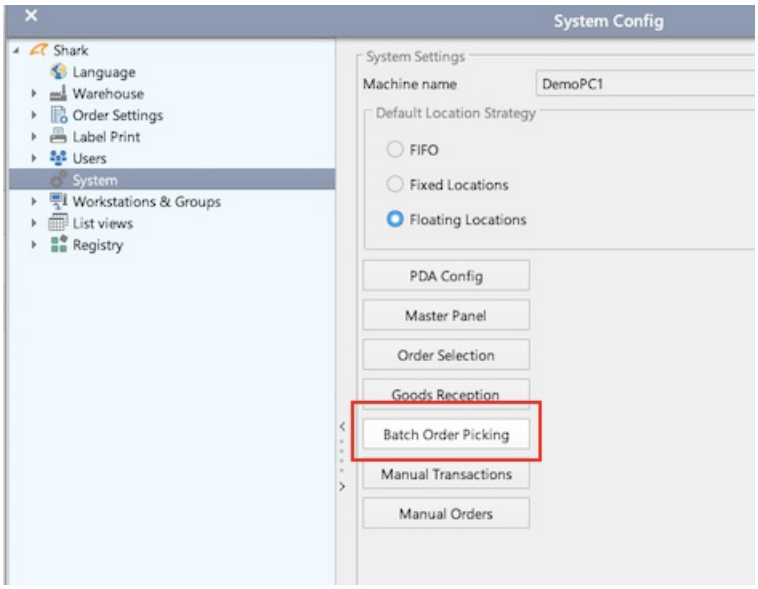
General Configuration

The Batch Picking panel can be customized with a number of parameters.

Open the configuration dialog from here:



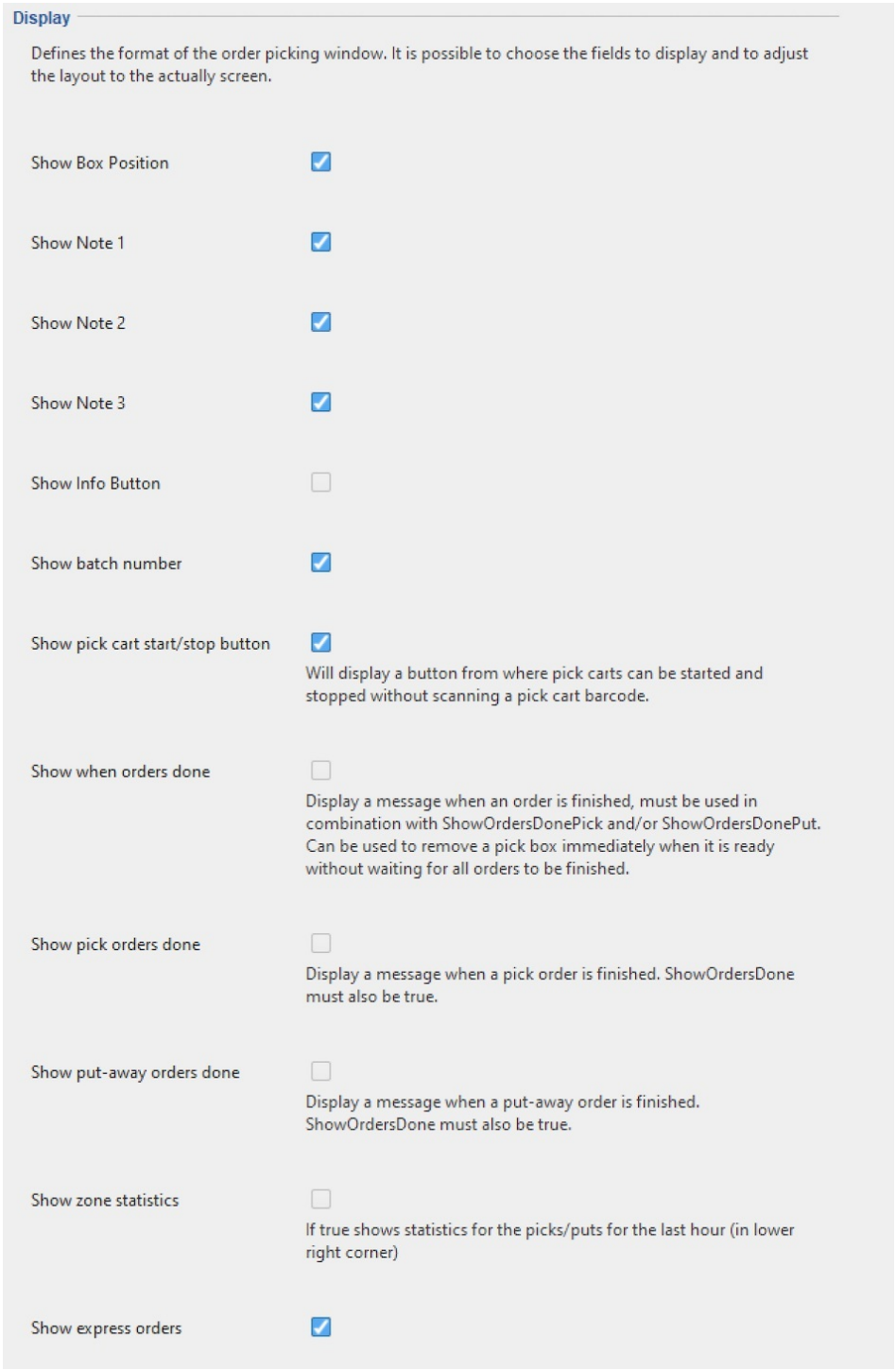
or from the main configuration:



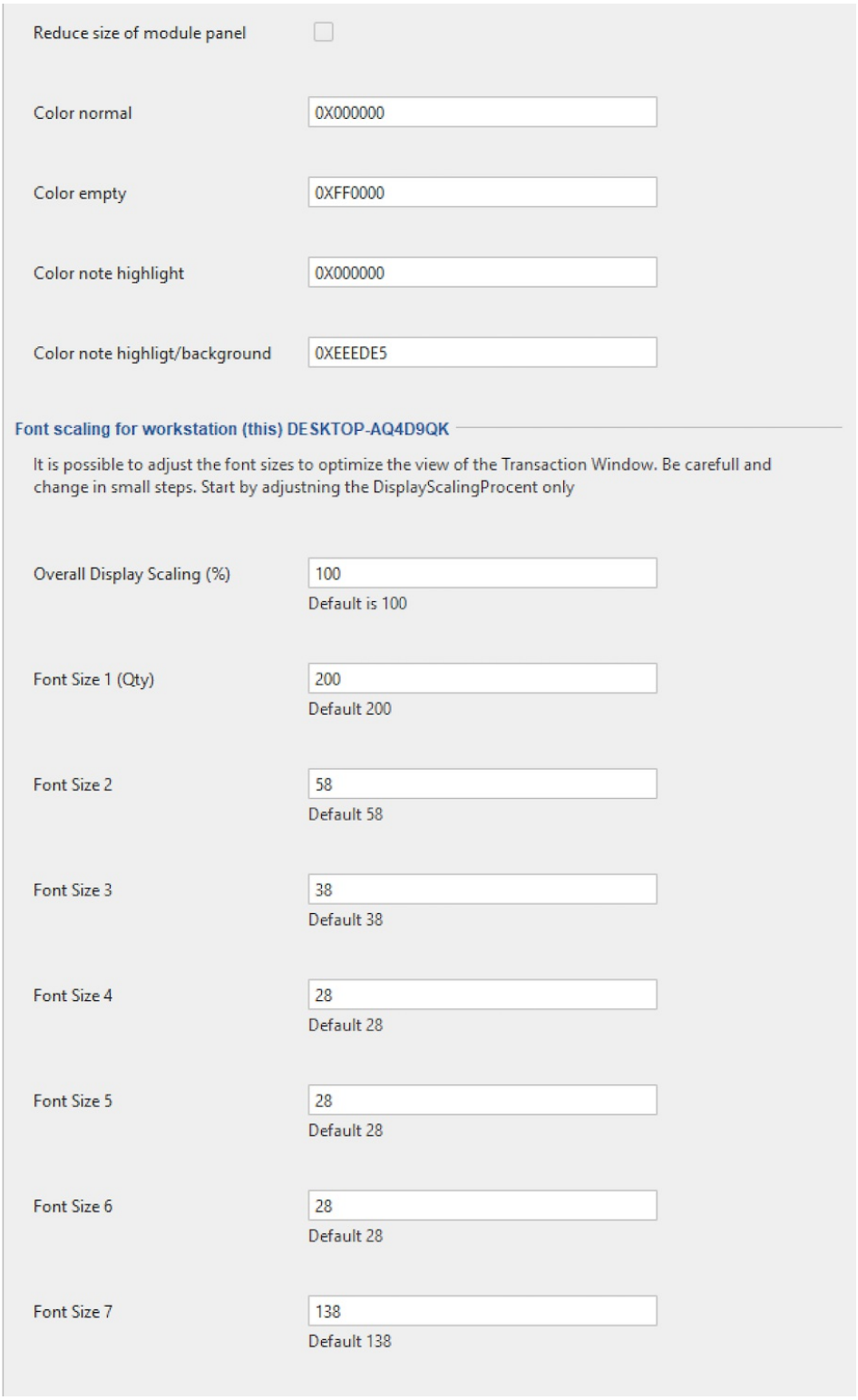
The configuration dialog has a number of sections.

Display Layout

Select which fields should be visible. There is no need to show fields that are empty. It is also possible to change some of the used colors.

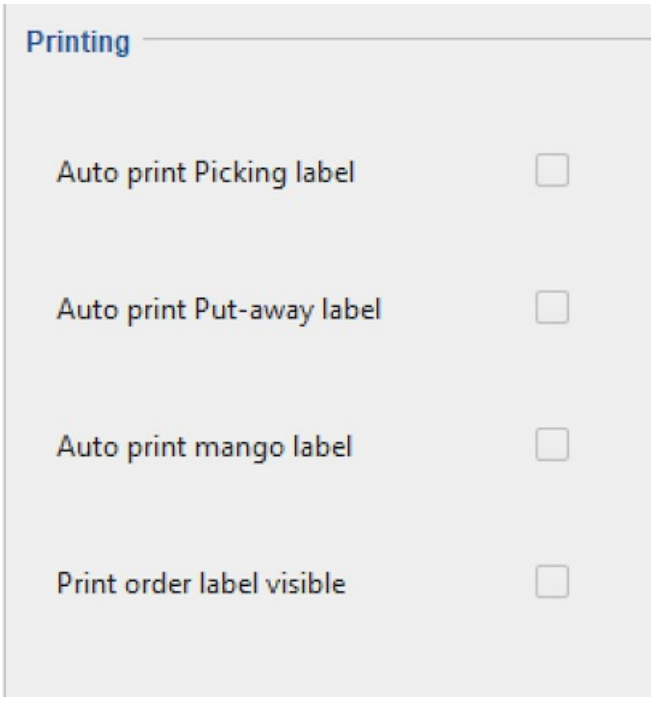


It is also possible to modify the text and button sizes. Be careful when adjusting the layout, it is easy to make a setup that will not fit on the screen.

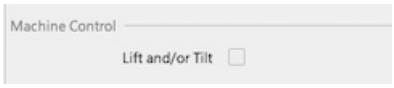


Printing

Enable automatic printing of labels and choose if print button should be visible.



Machine Control



Show Article Picture

The picking window may show a picture of the current picked item.

First enable the display of pictures.

The pictures must be stored, either on a web server with http access or on a shared folder accessible from the PC that will display the item.

The pattern is an URL and is used to define where the image is found. The simple format is like this:

```
file:%ArticleNumber%.jpg
```

%ArticleNumber% is replaced with the current article number. Specify the correct absolute path to the file. Prefix with "file:" or "http:" depending on the protocol.

In case the formatting is more complicated, it is possible to use Groovy scripting:

```
${'file:/Users/sos/tmp/' + article + '.png'}
```

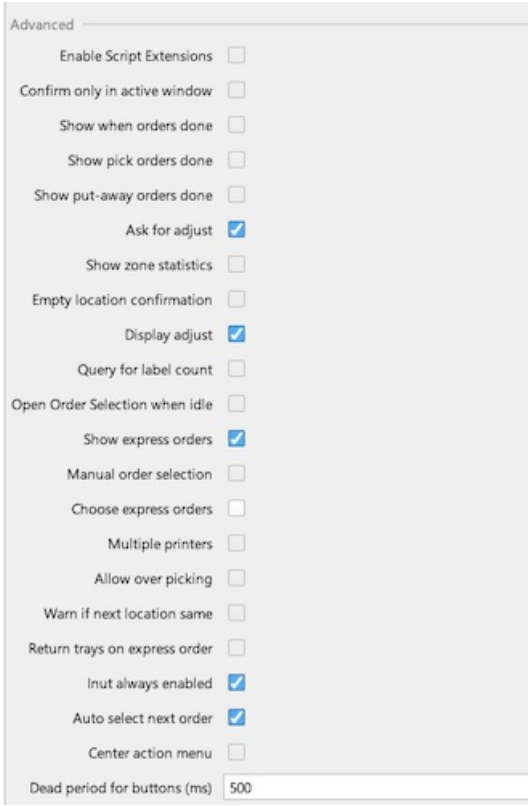
The script must start with "$" and enclosed by "{..}".

"article" is the variable that has the current article number.

This syntax allows more advanced formatting, for example if the article number includes a "#" that is not allowed in the path to the file, it could be removed by:

```
${'\\hostname\\folder\\' + article.replace('#','') + '.jpg'}
```

Advanced



Enable Script Extension: This will load a script into the order picking window for advanced customizations.

Confirm only in active window:

Show when order done: Display a message when an order is finished, must be used in combination with ShowOrdersDonePick and/or ShowOrdersDonePut.

Show Pick Orders done: Display a message when a pick order is finished. ShowOrdersDone must also be

true.

Show Put-Away orders done: Display a message when a put-away order is finished. ShowOrdersDone must also be true.

Ask for adjust: Ask for an alternative location if quantity is corrected.

Show zone statistics: If true shows statistics for the picks/puts for the last hour (in lower right corner)

Empty location confirmation: If true the user must confirm when a location is picked to zero.

Display adjust:

Query for label count:

Open Order Selection when idle: As standard the order picking window will just be greyed out, if there are no active orders. Activating this function, the Order Selection window will be opened automatically. This might ease the use in some cases.

Show express orders:

Manual order selection:

Choose express orders:

Multiple Printers:

Allow over picking: Allow the operator to pick more than specified by the order.

Warn if same location the same:

Return trays on express orders:

Input always enabled:

Auto select next order:

Center action menu: On some screen, the action menu may start partly outside the screen. Activate this function to fix the problem, by displaying the menu in the center of the window.

Dead period for buttons (ms): To avoid double clicking. If a pick is confirmed and the next pick is shown immediately after, it might be possible by accident to confirm more than one pick. Use the dead period to avoid that.

Pick List Handling

LogiSoft supports picking by paper picking lists. In general it is recommended to use PC or PDAs that are online with better support for alternative locations, stock adjustments etc., but in some situations it might be practical to use paper for picking. For example if a part of the warehouse is not covered by WIFI or if only few items have to be picked.

The picking list may contain multiple orders. The lines are sorted after the location sequence.

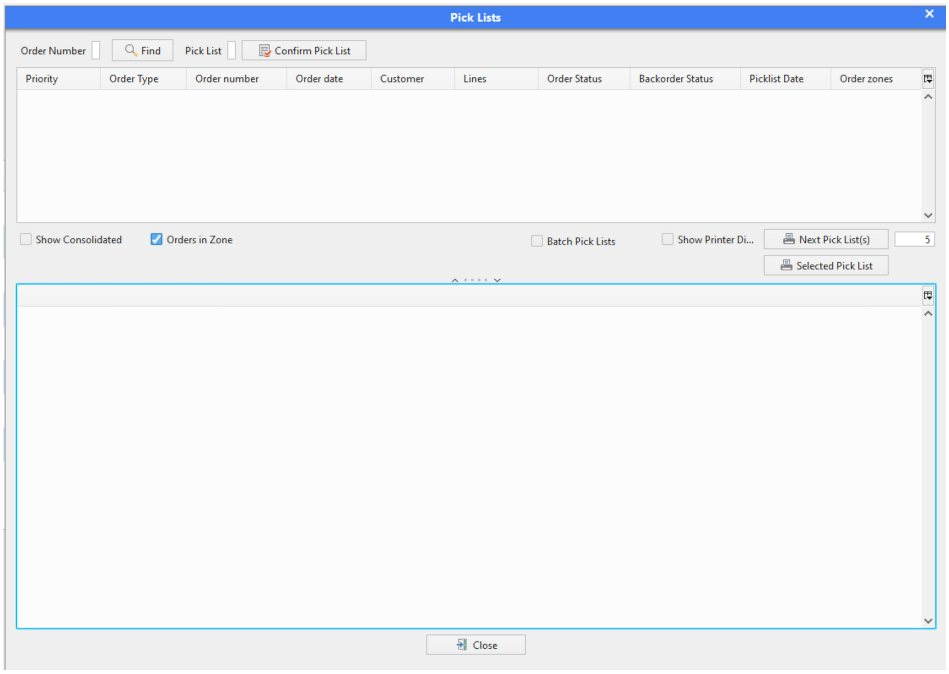
Navigation

Open the pick list handlig window by Transactions -> Pick List.

The menu entry is not enabled by default, if it is not visibly it must be activated in the configuration.

Print Picking List

Confirm the Picking List



Consolidation and Shipment

LogiSoft has a general function for consolidation and shipment. This function has several purposes:

- When the order is being picked from several areas, articles picked in different zones are typically collected and shipped collectively.
- Ensure the delivery quality by controlling that the right quantity of goods has been picked, and all lines are delivered correctly.
- Individual missing articles may be picked at the time of shipment. This could be advertisements or the like, which are not stored in the normal warehouse.
- Packaging the shipment.
- Printing of packing lists, delivery note, shipment labels etc.
- Feedback to the Host System that the order has been completed.

Typically, one or more of these points and in some cases no consolidation is needed at all. This may be the case if only one zone is being used, and line checks are deemed unnecessary. This can also be because the consolidation and shipment functions are being managed by another ERP or warehouse management system.

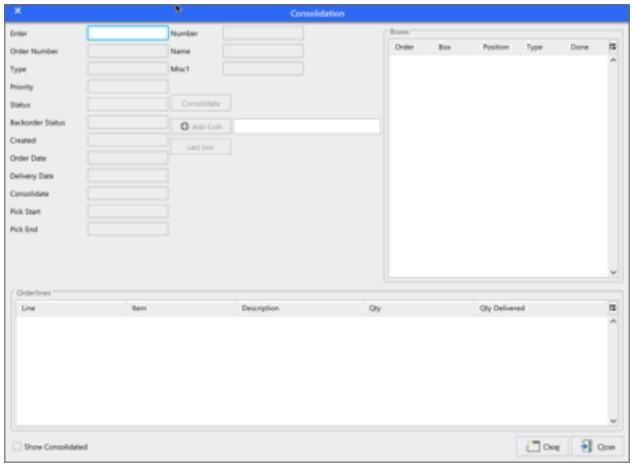
You may also choose a picking strategy like serial pick (relay picking), where consolidation is not necessary. Consolidation can also be done without the help of LogiSoft. In this case, the picker may, for instance, deliver the goods according to a route number or something similar, or to a location where the person packing his truck etc. will later consolidate.

Process: Basic Consolidation

In the consolidation area, boxes picked for the same order, but from different zones are merged and packed together.

Step 1. Open the Consolidation Window.

Step 2. Select the next order to consolidate.



Different methods for selection an order to consolidate:

- Press Enter in the search field when the screen is empty. This will search for the next order where all

boxes are in the consolidation area (requires that the boxes are scan on a *consolidation position*.
- Enter an order number.
- Scan a box/pallet barcode ready for consolidation.
- Scan an article number. This will find orders that contained the scanned article if it is picked.

Step 3. Find the boxes for the order.

When the order is found, all boxes in that order is displayed. If the boxes are scanned to a position that is shown as well to make they easy to find.

Step 4. Optional repacking of the boxes to shipment parcels.

Step 5. Confirm the Order.

When all boxes are found and packed, press [Confirm] to finish the order.

Manual Transactions

Manual picking and putting is used for picking/putting away separate items without use of orders. The function can, among other things, be used in combination with small installations where there is no interface to an ERP system, but it is general useful for ad hoc picking and putting of items. The options are as follows:

- Search (Pick, Put, Set)
- Pick Based on Item Number
- Getting an Automat Tray
- Setting of Stock Balance
- Putting of Item on Existing Location
- Adjusting Tray Layout

The window for *manual transactions* has 4 tabs that each covers one of the four main functions. Having these four tabs ensures that one does not unintentionally carry out inexpedient actions.

If the system used with multiple article owners, enter the article number as: *article number* / *owner*. Normally "/" is used to separate the article number and owner, this can be changed by system configuration.

Navigation

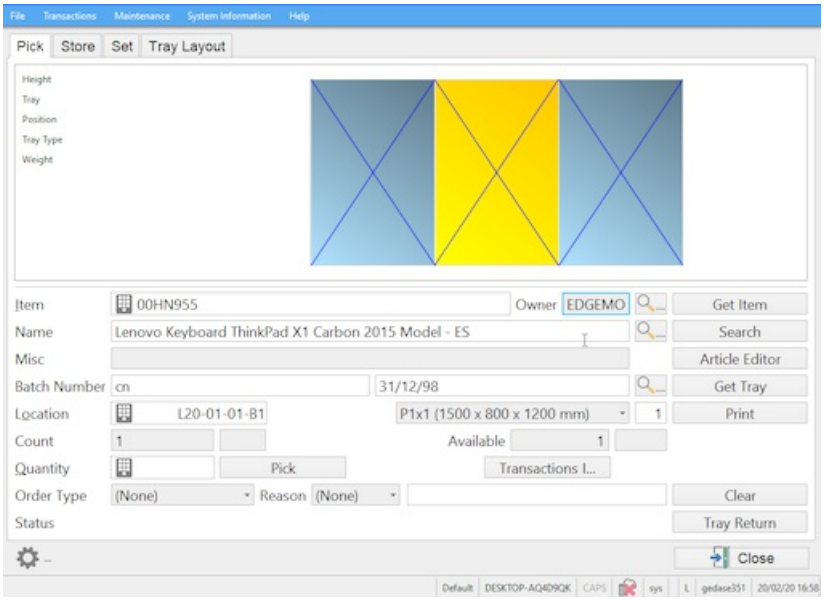
Keyboard: CTRL-M

Menu: Transactions -> Manual Transactions

Then choose the desired function using the "tab" (Pick, Put, Set, Tray Layout)

Search (Pick, Put, Set)

For both picking, putting, and stock setting it is possible to *search* for a particular article either by item number or description. Type as much of the number (in the number field) or name (in the name field) as you know and press [Search] or [Get Article]. The search will return:



One matching article: If there is only one article that matches the description, all fields will be filled with information about the given article.

Multiple matching articles: A list is shown, listing the potential articles. The desired article is chosen from the list using either the cursor keys up/down or the mouse.

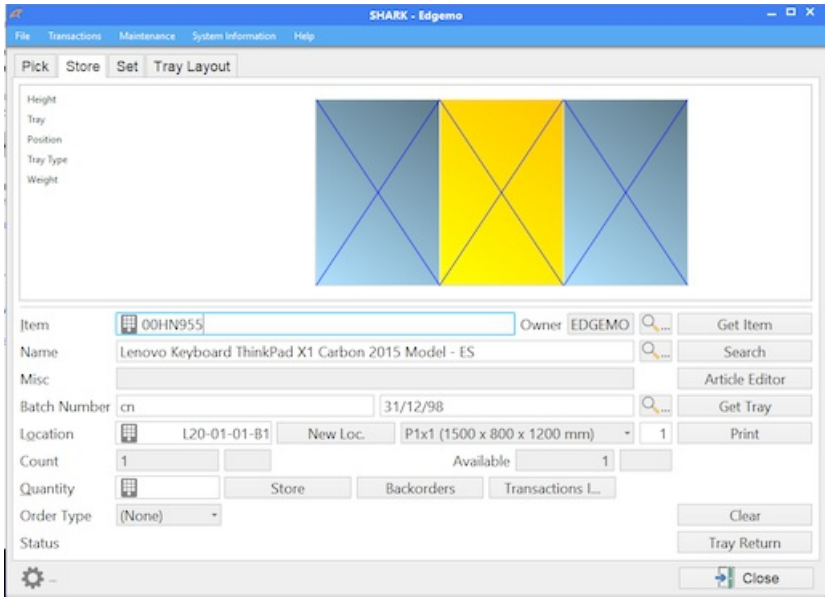
No match: If no matching articles are found, LogiSoft will prompt you to create the item in the database as a new article. You can do this if you wish to do so. Thus, this function can be used as shortcut to creation of new items.

The difference between [search] and [Get Article] is that [Search] finds and updates the window, whereas [Get Article] first searches for the article and then gets the item (tray) if the work is carried out in an automat zone.

Normally, the search will be based on the beginning of the number or name. If one wishes to search on a part of the number or name figuring in any possible place in the text, one can begin the entry with a "%" character. For instance, a name search performed on the entry "%screw" will return all the articles in which *screw* is part of the name.

Put-away

From the Put-away Tab one can search for and put away items. Depending on the configuration, it will sometimes be possible to pick based on an entry of an existing order number or on an entry of a particular transaction type.



Number: Article number.

Name: Article name.

Location: Location of the article.

Count (Location): Quantity on the location.

Box Type: Box type for the location in question.

Available: Shows the quantity available for picking from the location. Available quantity represents the actual quantity on the location minus transactions that have a particular number of the given item reserved. It is not possible to pick more than the number stated as the quantity available.

Quantity: Here you state the quantity that is wished to be picked.

Order Type: If one chooses a specific order type, an order with the given order type will be created for the pick. The ordernumber will be automatically generated.

Ordernumber: Here one can state an ordernumber of an *existing* order. It is not possible to combine *Order Type* and *Ordernumber*. If an ordernumber is stated, it must be an existing order and the order type will then appear from this order.

Status: Status of the picking progress.

[Get Article]: Search and get article (if automat).

[Search]: Search for an article when only a part of the name or number is stated.

[Get Tray]: For an automat location, this button can be used to get a tray.

[Print]: When a label printer is connected and a template has been created, the print button will print a label.

[Clear]: Clears all fields.

[Return Tray]: Returns a tray to the hatch (for automat zone).

[Close]: Closes the window.

The option to create new ordernumbers or reuse an existing one is a function that is used in connection with an ERP system that allows this. One way of using this is e.g. in connection with production orders where material is missing or surplus material is to be put away.

Pick Based on Item Number

Picking an item:

- Choose the Pick tab
- Type the item number and finish by pressing [Enter]
- In case the item is found at multiple locations, a menu from which the desired location can be chosen will appear
- The item is displayed and if it is an automat, the relevant tray will be loaded
- Type the desired quantity in the ”quantity” field
- Press [Pick]

Getting an Automat Tray

If one is standing in an automat zone and a location has been chosen it is possible to get the tray that the location is found in by pressing [Get Tray]

[Get Tray]: Gets the tray that is stated in the location field.

Storing articles on Existing Location

Storing an articles:

- Choose the put tab.
- Type the item number and finish by pressing [Enter].
- In case the item is found at multiple locations a menu from which the desired location can be chosen will appear
- The item is displayed and if it is an automat the relevant tray will be loaded.
- Type the desired quantity in the ”quantity” field.
- Press [Put].

Storing articles on Empty Locations

Storing an article on an empty location where LogiSoft determines the location:

Choose the put tab.

Type the item number in the item field.

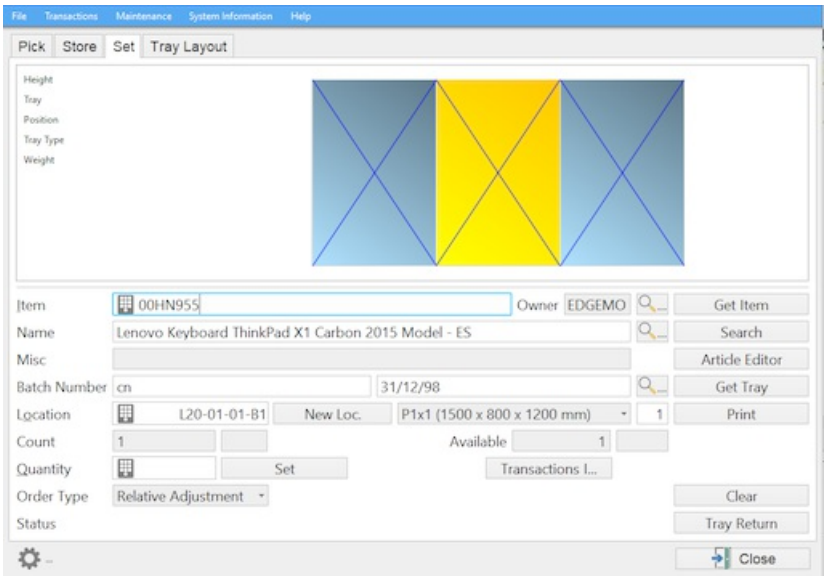
Choose the location type that is wished to be found.

It is possible to type a part of the location name in the location field, e.g. “A1” in case one would want a location in automat A1:

- Press [New Location].
- Press [Get Tray]
- Type the desired quantity in the ”quantity field.
- Press [Put].

Adjusting the Stock

In certain instances it can be necessary to set the number of items that is registered in the stock. This can be done at any time when a valid item has been chosen. The function can be carried out whether the tray is in the operation opening or not.



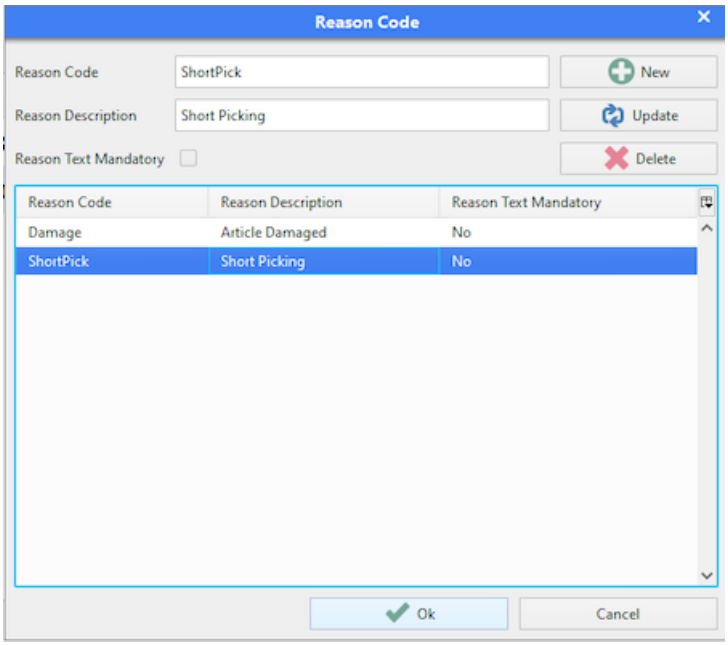
- Type the ”Item number” or scan the barcode.
- Press [Search] in order to carry out update while the tray is not by the operation opening (Automats) or click [Get Item] in order to get an automat tray and information about the quantity of the item.
- In the Quantity field the correct number of units at the location is entered.
- Press [Set] in order to update the database.

Reason Codes

Reason codes are a fixed list of *reasons* that can be used to specify why the stock is adjusted without an order from a host system. Optional a free text can be added as well.

The same functionality can also be used for supporting *Cost Centers* - who is going to pay for operation.

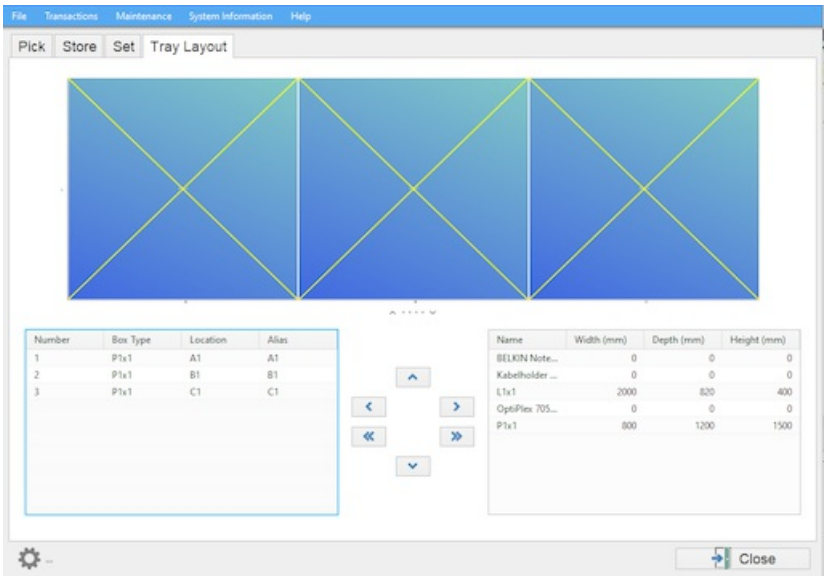
The reason codes can be specified from the menu Maintenance -> Reason Codes. This menu is not enabled by default.



The reason codes also have to be activated in the Manual Configuration menu.

Adjusting Tray Layout

From the tab ”Tray Layout” changes can be made to the separate trays/shelves. Here, you can delete empty boxes and replace them with new ones as well as move around existing ones. The function is used exactly in the same manner as the *Tray Editor*, except from the difference that the changes are not made to the tray type but instead only to the selected tray.



Quick Move in Tray

Is it often need to have to move goods around in a tray, there is a "quick move" function. It is by default not available.

Quick move:

- Click on the location to move.
- Click on the [Move] button.
- Click on the target location.

To make the feature available, the configuration parameter *MoveItemsInTrayAllowed* must be enabled.

Viewing Tray information

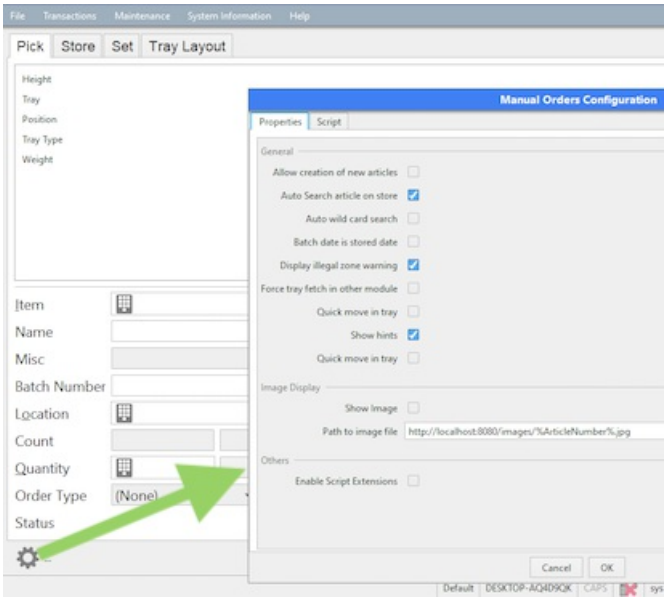
If used in combination with automation, it is possible to show additional information about the current tray. It depends on the actually hardware what is possible.

Show article image (optional feature)

In the configuration, a path can be defined to an image folder. If available picture can be displayed. The name of the picture file is specified as a path where a *place holder* %ArticleNumber% will be replaced with the current article number.

Configuration

There are a number of configuration options for the Manual Transactions.

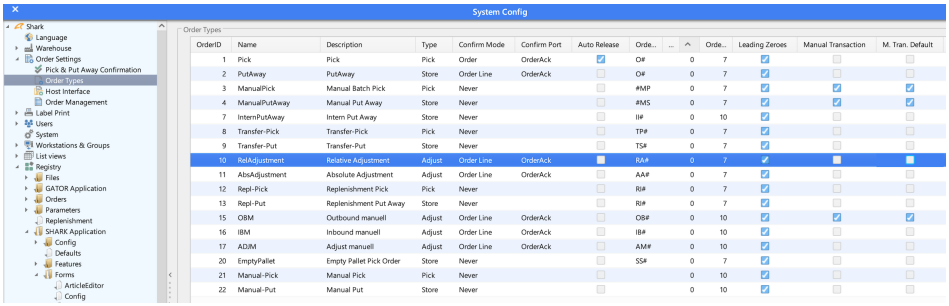


*Open the configuration menu from the "gear button". You must be System user to get access to this function.

Used Order Types

When the manual transaction is performed, LogiSoft may generate an internal order. This order can be used for logging and reporting back to a host system, that a stock change has been made without an order from the Host System.¨

What order types are available, can be defined in the Order Type configuration.



The typical configuration is to define Order Type 3,4 and 15. Select "Manual Transaction Default" for the order type that should be used as the default chose. Multiple order types can be defined, allowing the operator to tell the host the reason for the manual transaction.

There is a special type "none" that will not generate any order and thereby not report back to the host. This can be disabled by configuration.

Order Management

Before an order can be picked it must be released. Depending on the configuration of the system, this can happen immediately when the order is received, and it can be controlled using the order release function. Releasing an order provides the opportunity to dispose of which orders are to be picked at what time. The criteria by which the release takes place is determined solely by the user. These could for instance be all of the orders that are to be shipped on the same date, orders that are to be delivered to particular clients, or orders that are to be shipped via a particular means of transportation.

When an order is released, a transaction is created for the order so that the specific location and the item is reserved for this order. This means that the item cannot be picked for other orders. Therefore, one should be careful about releasing many orders that are not intended to be picked within the near future, as they will then potentially block the handling of other orders in the event of shortage of items.

It is possible to configure LogiSoft so that orders are automatically released upon receipt from the ERP system, controlled by the time of delivery of the order or by the selection of the order on the order selection screen.

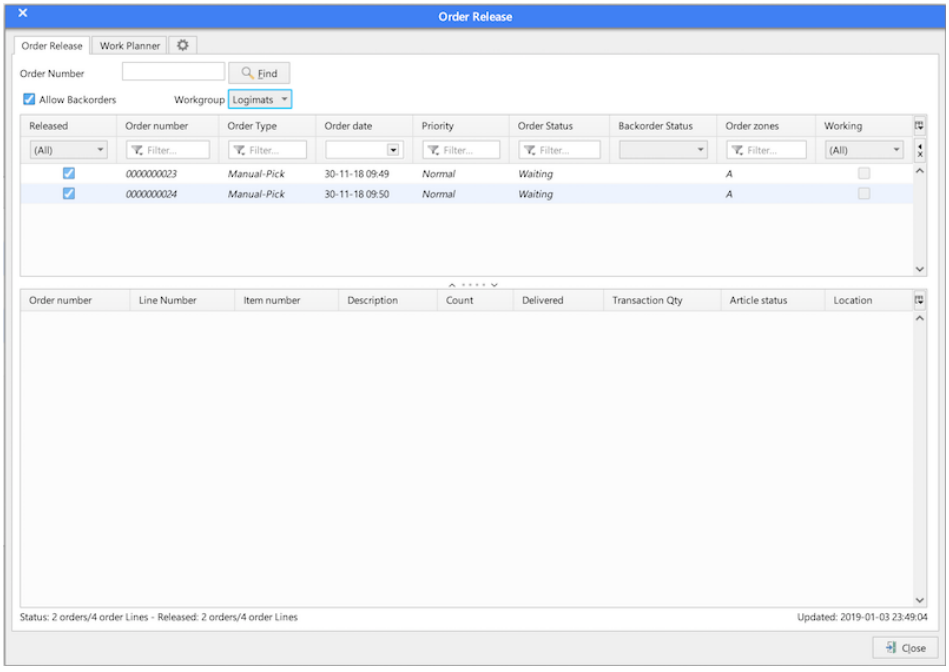
Order Release

Keyboard: CTRL+F10

Menu: Transactions -> Order Release.

Functionality

The screen below is used for controlling the release of orders.



Orders for release: Type the number of the order that is to be released when [Release Order] is pressed.

Release Orders: Click here to release the orders on top for picking or placement.

Display released orders: Tick off this box to also get a view of orders that have been released.

Sorting: It is possible to sort the orders by clicking in the name field above a column. Click once more to sort in reverse order.

Released: By clicking the field ”Released” you can choose to release a single order. It is also possible to undo and recall and order that has already released.

Allow Remainder: When this option is not chosen, one cannot release orders in situations when the order cannot be picked in its entirety.

Show what the order contains: click the order in question. The bottom table will now show orderlines for the order chosen. If the order is released you will also see the locations from which pickings for the order take place.

Release a Particular Order

Procedure for releasing a particular order number:

- Find the order, either by typing/scanning order number in the order number field and pressing Search or [New Line], or by finding the order from the list.
- Click the Released box or right-click with the mouse on the desired Line and choose ”Release Order”

Release a Number of Orders

It is possible to release a number of orders by using the button [Release Orders] and entering the number in the number field that is located to the left of the button. It is not necessarily the first orders in the list that are chosen, but the orders that are first in accordance with the regular priority system.

If instead you wish the release of a number of orders chosen by a sorting in the list on the screen, choose first the desired sorting, then pick the orders that are wished for release, right-click on the mouse, and choose “release order”.

Recall Orders

An order that has already been released can be recalled if it is not in the progress of picking. In this way it cannot be picked any longer before it is once again released.

- Find the order, either by typing/scanning order number in the order number field and pressing Search or [New Line], or by finding the order from the list. You can choose more than one order at a time.
- Right-click with the mouse on the desired line and choose ”Recall Order”.

Re-releasing

In certain instances it can be practical to recreate the transactions that are to be used for the picking of an order. This can for instance be if an order is to be picked from other zones, typically due to stock modifications or other changes in data performed since the original release of the order.

- Find the order, either by typing/scanning order number in the order number field and pressing Search or [New Line], or by finding the order from the list. You can choose more than one order at a time.
- Right-click with the mouse on the desired line and choose ”Recall/Release All”.

Changing Priority

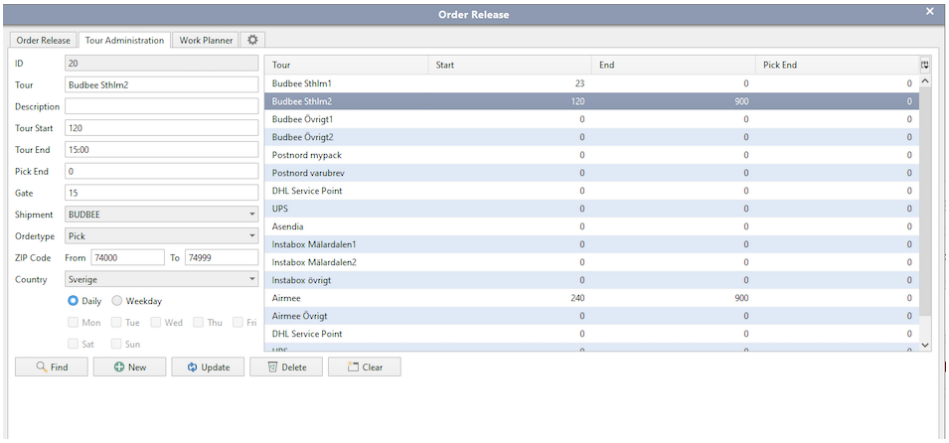
You can increase or decrease the priority of an order and thereby control which orders that are to be picked first.

Cancellation or Closing of an Order

It is possible to cancel an order in the order release. This could be desired either because you do not wish the order to be picked or because another order having been partly picked cannot be finally picked. If part of the order has already been picked, a cancellation will only mean that the remaining part of the order cannot be picked and that it will be reported back to the ERP system as partly picked. Thus, the cancellation does not delete the order and will still be visible in the Order Editor.

Tour Management (optional feature)

Tour Management is used for controlling order release by carrier and delivery address (zip codes and country). So the carrier is suppose to pick up the goods at 15:00, the tour management allows automatic prioritizing of those orders in a specified time period before the pick-up time.



Fields:

Tour End: This is when picking should should stop, typical a little while before the pick-up time.

Tour Start: This the *number of minutes* before Tour End the picking should start. So if "Tour End" is 15:00 and "Tour Start" is 120, it means picking will start at 13:00 (120 minuts before 15:00).

Gate: The gate where the collies are supposed to be delivered - or if an automatic sorter is used, where to sort.

Shipment: Name of the carrier.

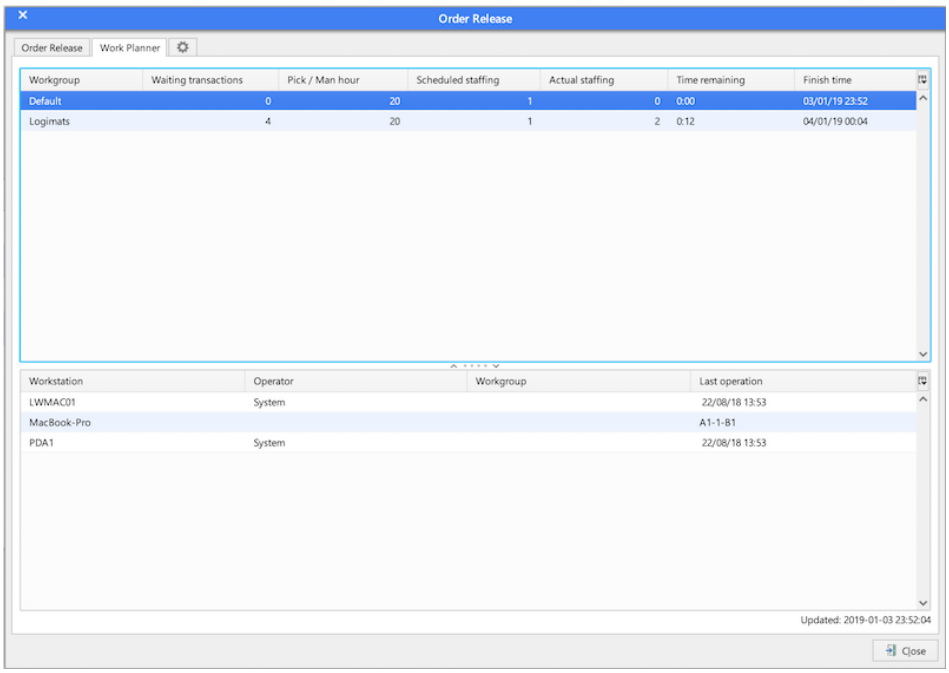
Zip Code From/Zip code To: Zip code interval for this tour. Leave empty to ignore.

Country: Only orders with this country in the deliver country field will be managed.

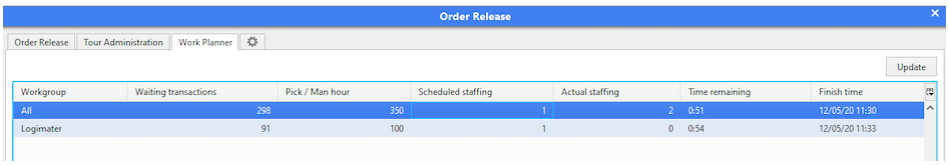
Daily/Weekday: Choose the days where the tour should be active.

Work Planner

The Work Planner is used to plan the staffing and to estimate the amount of remaining work.



Example:



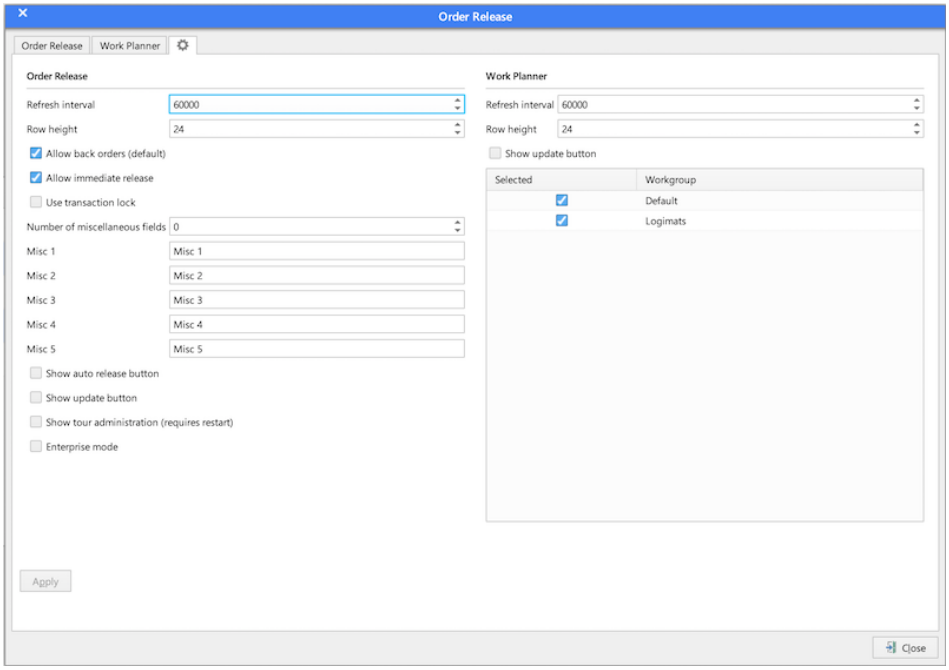
In work group "All" there are 298 waiting transactions. It is estimated that an operator can pick 350 transactions per hour. It is planned with 1 operator and it means picking will finish in 51 minuts. There are actually 2 logins in the work group, so it should be faster.

Double click on Pick/Man Hour to change the expected value.

Note that only released orders are calculated. if the orders are not released, the pick locations are not known and cannot be included in the calculations.

Configuration

The behavior of the Order Management window can be adjusted from the Configuration tab.


Order Release
Order Release
Work Planner
Order Release
Refresh interval
60000
Row height
24
Allow back orders (default)
Allow immediate release
Use transaction lock
Number of miscellaneous fields
0
Misc 1
Misc 1
Misc 2
Misc 2
Misc 3
Misc 3
Misc 4
Misc 4
Misc 5
Misc 5
Show auto release button
Show update button
Show tour administration (requires restart)
Enterprise mode
Work Planner
Refresh interval
60000
Row height
24
Show update button
Selected
Workgroup
Default
Logimats
Apply
Close

Pick Carts

The function ”Registering of Pick Carts’ is used to assign boxes and orders for a pick or put-away cart, so that when the cart is brought into the zone to which it is affiliated, it is ready to begin a batch picking. The boxes/orders that are assigned, are assigned to the zone/work group that the client for whom the registration is taking place is affiliated. This is chosen via the menu ‘Zone Relation’.

The function provides the opportunity to automatically choose a number of boxes/orders (in accordance with the number defined position on the pick cart) and in connection hereto print the labels for the boxes. This is for instance used in connection with Pick & Pack.

The boxes can also be ticked off separately.

Note that when reference is made to “carts”, it may just as well be a pallet or any other means of collecting a number of order lines in a batch.

Pick carts must be created in the system in order to be put to use, refer to Error: Reference source not found for a description of how pick carts are created.

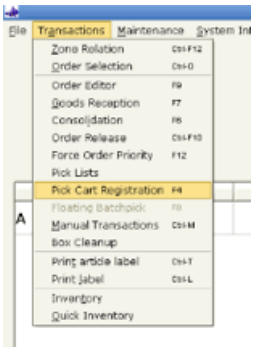
Note: Pick carts will only be assigned order lines that can be picked i the work group that the PC in question is part of. This means that if the PC is not assigned to a work group it cannot be used for the creating of a pick cart. The reason for this is that it brings about the opportunity to create carts that only contain lines from one part of the stock. One can for instance create carts that online contain order lines from one automat area, while the rest of the order is picked from another area (work group). Pick carts that are created in a particular work group will be picked *serially* (relay) within the group. Carts that are created in different work groups will be picked in in parallel.

Navigation

Menu: Transactions -> Registration of pick carts

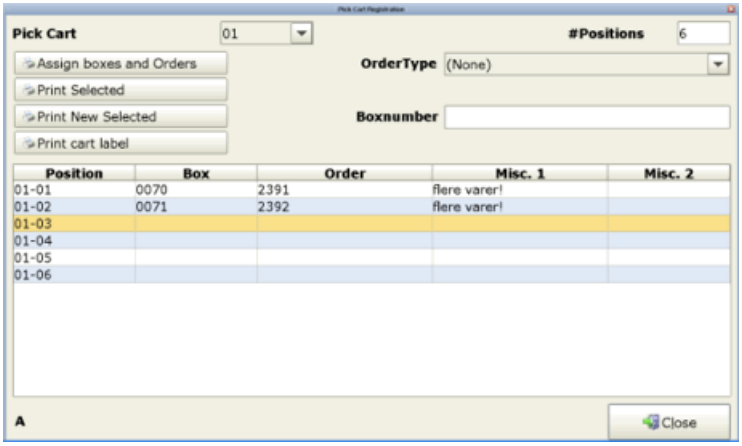
Hotkey: F4 or scan barcode (cart number) on the pick cart.

Opening the registration screen directly using a barcode is only possible when using a correct ”pick cart label” that is recognized by LogiSoft.



Functionality

Functions of the pick cart screen.



When the dialogue is opened, all positions that have not been assigned an order will light constantly on the pick cart if this is equiped with lights and push-buttons.

If use is taken of Pick & Pack, simply press the button ”Assign boxes and orders”. In this case, as shown in the figure, nine orders will be assigned. Labels can be printed automatically with the desired information.

Configuration of labels for this function is carried out under ‘Administration->System Configuration’.

Create Cart With Pre-numbered box

When working with fixed boxes (boxes that already have a number) the work procedure is as follows:

1. On the pick cart, press the button and position for which an order is wished assigned, thereby choosing the line in the dialogue above that corresponds to the position. Alternatively, choose the position in the dialogue using the mouse. The position will then light up on the pick cart. It is also possible to scan the barcode with the position of the pick cart.

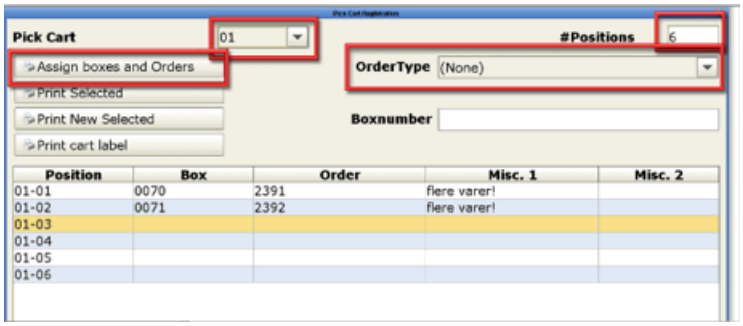
2. The barcode on the box is scanned.

3. The order is then automatically assigned.

When a box that has already been chosen is chosen again, it is removed. Therefore, if you wish to uncheck the order/box, simply go through the same procedure again.

Create a Cart With Picking Orders Chosen by LogiSoft

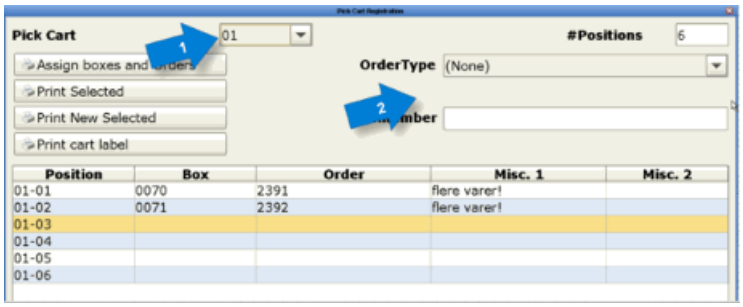
This function is used when you want to create a new cart and where LogiSoft determines which orders are to be picked first. Only released orders are chosen and the ones with the highest priority are chosen first. The function is typically used combined with printing of box labels, in situations where picking takes place directly in the boxes that the order is shipped in and where LogiSoft automatically prints a label to be put on each box.



- Choose which pick cart is wanted (if the barcode is scanned it will happen automatically).
- Choose how many orders that are to be activated.
- If desired, choose which order type is wanted on the cart. In this way one can avoid mixing different types.
- Press [Assign boxes and orders].

Create a Cart With Picking Orders Chosen by user

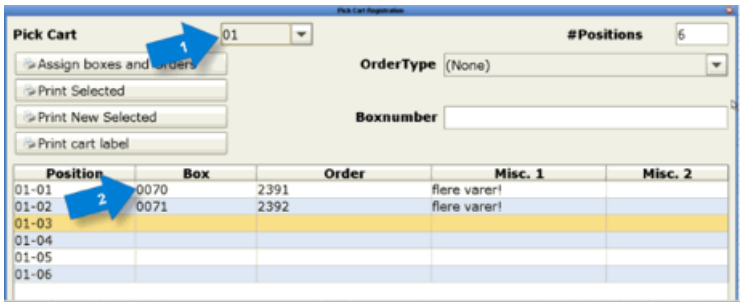
Same procedure as when the order is determined by LogiSoft, only one type in the desired order number in the *order number field*.



- Choose which pick carts you wish (if the barcode is scanned this happens automatically)
- If it is not the position that has been chosen, pick the position first by clicking the line or by scanning a position barcode
- If you wish for the order to be put in a certain box, the boxnumber can be typed in the ”Box” field
- Type the order number that you wish to be put on the cart and finish by pressing [Enter]
- Continue with step 2 until the cart is ready

Create a Cart With Pre-chosen Boxnumbers

LogiSoft chooses the orders that are to be put on the cart but the user chooses which boxes are to be used. Use this function when you have a pick cart carrying boxes that are being reused and that have fixed boxnumbers.



- Choose which pick cart (s) is/are wanted (if the barcode is scanned this will happen automatically)
- If it is not the position that has been chosen, choose the position first by clicking on the line or scan a position barcode
- Scan the boxnumber barcode
- Continue with step 2 until the cart is ready.

Create a Cart with Put-Away Orders

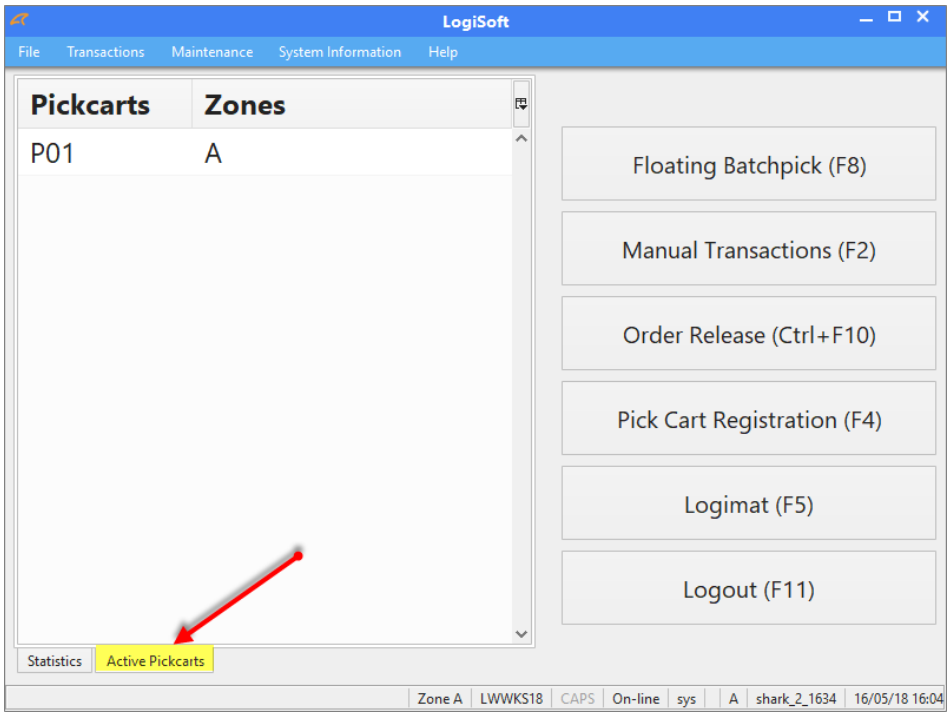
Used when one has one or multiple box(es) containing items that have been registered in the Item Receiving Module, carried out exactly as when creating a cart with pre-chosen box numbers, refer to Create a Cart With Pre-chosen .

Remove an Order from a Cart

You can remove an order (box) from a cart by opening the cart and right-clicking with the mouse on the line that is wished removed and choosing [Remove box].

Overview of the pick carts

The pick cart overview shows which carts are in use, and which zones they will be picking from/putting away in.



This function is only activated when using pick carts.

Pick-By-Light (PBL)

LogiSoft supports pick-by-light on the pick carts. The work process is:

1. When a pick is active, the active position on the pick cart is marked with a lamp.
2. Confirmation is done by pressing a bush button on the pick cart.

LogiSoft must be configured to confirm on, as minimum, box number. When the key is pressed, the box number is send and this will be used for the confirmation.

> Never configure the confirmation in LogiSoft tot accept anything, when using PBL functionality. It might end in *ghost confirmations* from other pick carts.

Stock Taking

Stocktaking (or stock counting) is when you manually check and record all the inventory that physical currently has on hand. This means identifying every item, counting it and summarizing these quantities by item. This is a highly labor-intensive process and may require a significant amount of down-time within the warehouse, so companies generally try to avoid stock taking to the greatest extent possible.

The *LogiSoft Stock Taking Module* support the process of physically counting the entire inventory or by using *cycle counting*.

Cycle counting involves counting a small amount of the inventory in the warehouse each day, with the intent of counting the entire inventory over a period of time. Any errors found during these small incremental counts result in an adjustment to the inventory.

The Inventory Module allows you to continue the normal warehouses processes while counting, it works the following way:

- When a location is counted, the actually quantity is recorded as well as a possible error. The error is a relative value and is the difference between the expected and actually value. The stock is *not* updated at this point of time.
- The normal work can continue, and if there are picks from the counted locations, the error will remain the same. When the administrator has accepted the counting, the inventory order is closed and first then, the locations with errors will be updated. The relative error is used for the update and thereby taking transactions that happens between the physical counting and the location update into account.

Although it is possible to continue normal work while counting, it is recommended to finish the counting order as fast as possible. It can be difficult later to track what happened if a location for example is emptied and another item is stored there no. If a location is replaced with another SKU, before the counting is committed, the adjustment will be ignored.

There may be accounting rules that require you to perform a physical inventory at least once during each fiscal year, for each storage bin. This physical inventory checks whether the book inventory balance matches the actual stock.

Stored information for the locations

LogiSoft maintains the following information for each storage location (bin):

- When the location was *last accessed*. Every time a location is used, the time will be recorded.
- When was the last store operation at the location. When articles are stored at a location, the time will be recorded. A possible strategy might be counting a location every time put-away is taking place and the location is already ”open”. In this way, many location may be by-passed during the normal stock-count.
- When was the *last inventory* of the location? When a stock count has been made, the time will be registered. This information is used for selection which locations to count and to ensure all locations are counted at a regular basis.

What must be counted: Locations rather than articles. One typical requirement will be that all locations are counted within a given time frame, for example once a year. This means that if the article is stored at several locations, they will not necessarily be counted at the same time. Please note that there is nothing that prevent counting articles instead of locations, it just take longer time.

Strategies

Annual Inventory

This is the classic method, the warehouse is closed for some days and everything is counted. The disadvantage is, of course, that no articles can be delivered during this time.

Cycle Counting

Cycle Counting* or *Continuous Inventory*. Here the physical inventory for all storage bins over the course of the fiscal year in small portions, for example daily. After one year, all locations have been counted. This allows you to use not so busy periods with stock counting. * When articles are stored on a location.

When locations are emptied

When a location is *emptied*. It is obviously easy to count when a location goes down to 0. LogiSoft has a facility indicating on the screen when the location is expected to be empty after a pick. The operator must then check that this also is the case. For articles with a high turnover, this can be a very efficient way, because all locations go down to 0 within the requested counting period and therefore actually never need to be counted.

How to handle empty locations

Zero locations constitute a special situation. These are locations where LogiSoft expects that there is no stock. It is also possible to count these locations to check that there actually aren't any articles at the location. Reasons for this are typically that articles in previous put-ways, always have been stored at wrong locations, meaning that the article will never be found until the location is used for a new article or until the location is counted.

How to perform the counting

LogiSoft both supports counting lists, where bar codes can be used for a subsequent quick PC registration or on-line counting using a PC or a PDA. Using a PC or PDA is recommended if possible.

There can be good reasons for both methods. If there are many people involved in the stock taking, PC's can be a limited resource and paper lists may therefore be quicker to use. Existing audit rules may also require paper documentation. Using lists has the disadvantage that the lists must later be registered on a PC, which takes time and involves risk of errors. It can also be time-consuming to find locations, for example in a vertical lift if you only have an address to follow. When LogiSoft is used for direct counting on vertical lifts, the screen and a possible light pointer will point out the location and the tray will be fetched automatically.

Control Recounting

In case of stock errors, you may want to recount some or all locations. LogiSoft supports recounting as many times as necessary.

The inventory module can be used for making up the stock in LogiSoft.

The availability of functions in the module depends on the system group that the active user belongs to. Administrators have access to all functions, including access to information about the expected number of items on the locations. An operator will only have access to type in counted locations and will not be able to see the expected number on the location (depends on the configuration).

The inventory module allows one to:

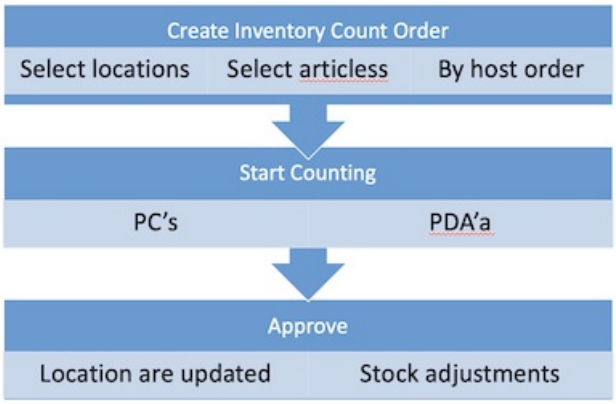
- Make up one or more part(s) of the entire stock.
- Perform continuous inventory.
- Pick and put away while counting is in progress.
- Recount locations with a difference (balance) as much as needed.
- Control when the stock is actually adjusted with balances.

The counting module supports stock automats and will automatically get trays when necessary as well as display an image of the tray organization during counting.

Stock-taking Procedures

An inventory runs through 5 steps, each of which is marked by the icons below:

1. New
2. Ready
3. In progress
4. Done
5. Completed



To switch steps for an inventory you are to use the buttons [Previous] and [Next].

Navigation

The management module for inventory functionality is found here.

Menu: Transactions > Inventory

In this screen you can name the inventory and add the locations that you wish to be included. If so desired, you can add some notes for the inventory by writing these in the Note field.

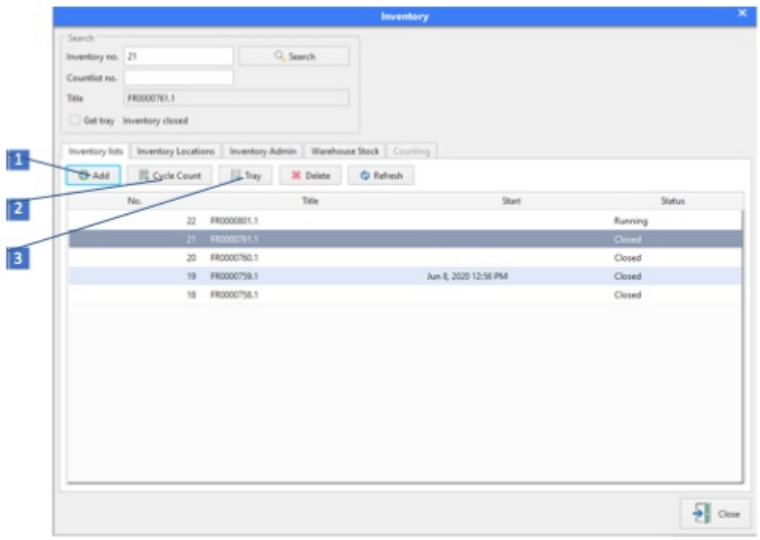
Click [Note] to open the note window.

To *delete* an inventory from the list of inventories, one must click the button "Delete". The inventory will then be deleted from LogiSoft and be marked as deleted. However, it is still activated. This means that it is possible to also see an old *deleted* inventory. By entering the *Inventory number* and pressing "Search", you will get to see the old inventory.

Prepare Counting - The quick way

Prepare Counting - Advanced

Step 1

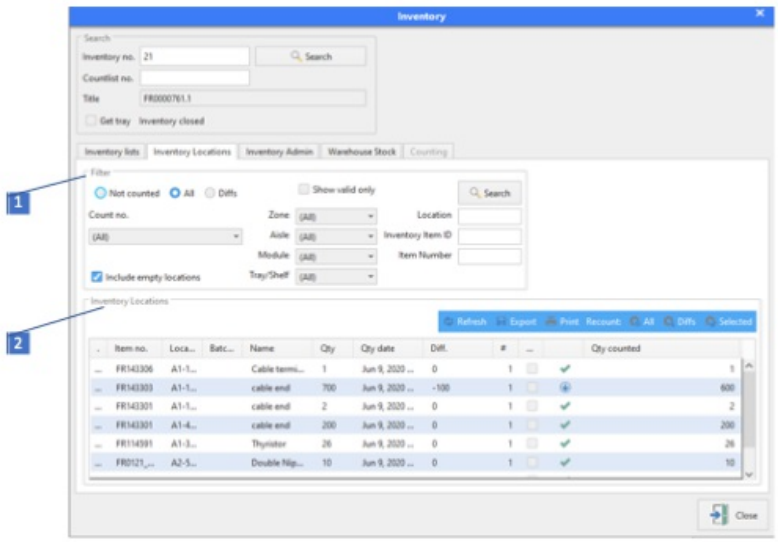


A new inventory begins at the step *New*. At this point you have to add the locations you wish to count and to name the inventory. It is not possible to activate the inventory order in the warehouse.

An inventory must have at least one location added before you can move on to the next step.

Note that it is only at the stop *New* that it is possible to add og remove locations.

Step 2 - Add Locations



When you wish to add locations to an inventory, you are to click on [Add locations] in order to open the location window. One can both add and remove locations. Current action is chosen from the options: [Add] and [Remove].

If you wish to execute an inventory in a small part of the warehouse it is possible to make the detailed selection of locations. You can either choose by zone, module, hall, or tray/shelf, or you can choose particular locations or item numbers. Both methods of selection can be narrowed further down by using criteria in regard to the previous inventory and the time at which the locations have previously been accessed.

In the "Filter" section you can see how many locations and item numbers the search criteria select.

To add locations to the inventory, click [Add].

To Remove locations from the inventory, click "Remove".

You can repeat the search using new criteria and add or remove locations until you have selected the desired locations.

The section "Mini Status" shows how many locations and unique item numbers that are included in the inventory.

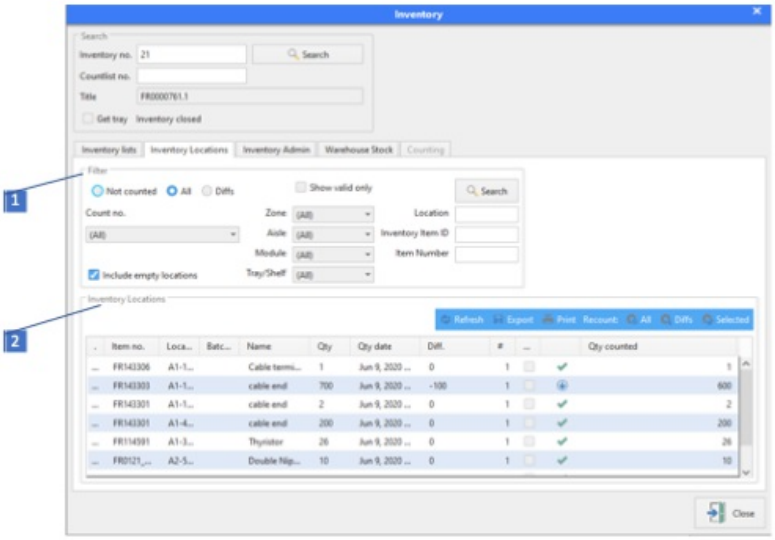
Add location, first by checking the "Add" box.

Remove location, first by checking the "Remove" box.

If you wish to add or remove locations that have been accessed after their most recent counting you are to check the box "Only locations accessed after last counted". A location is defined as having been counted every time something is put-away on it, when the location is accessed in an inventory and when the quantity on a location is adjusted.

If you wish to include locations that should not be containing items, check the box "Include empty locations".

Step 3 - The list is ready



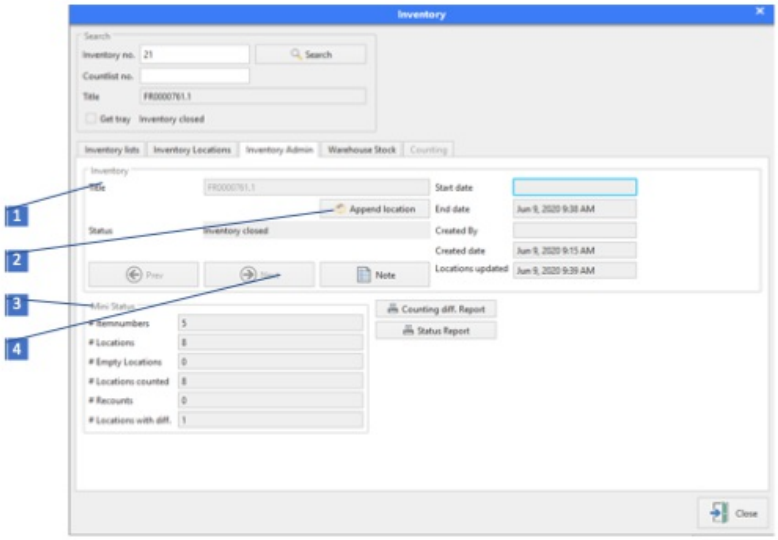
When all locations have been added to the inventory, click "Next" in order to move to the next step, *Ready*. This stage of the process simply consists of awaiting the beginning of the inventory.

This level has been integrated in the interest of making sure that one can prepare the inventory in good time.

Start Counting

When you wish to begin the counting of locations you are to click [Next] in order to move to the next step, In progress. When the inventory switches from the step Ready to the step In progress, LogiSoft takes a snapshot of the stock in all locations that are included in the inventory. This means that the quantity on each location is remembered so that the inventory can identify any diffs.

Lists of Counts



If you wish to count the locations using pen and paper in order to afterwards enter the values into LogiSoft, the first thing you do following the switch to the stop *In progress* is print the lists of counts. In order to print the lists of counts you are to click [Print]. The following dialogue box will then appear:

Automatic: When chosen, all locations included in the inventory will be printed. For each tray in the automat zones one counts list will be created and for each shelf in the other zones yet a counts list will be created.

Selected: First you select a subset of locations, e.g. zone A, automat 2, tray 2 og 3. In this way, the persons that count will receive a smaller and specific area to count within. The locations will afterwards be printed on the same counts list.

This division of locations into smaller counts lists makes it easier to distribute the counting work and helps the registering in LogiSoft, thereby reducing the risk of mistakes.

A *Counts list number* is created for each new counts list created. This number is stated on the bottom of each printed page, as text as well as barcode. The barcode can be used to search the locations in LogiSoft when you are to enter the counts into LogiSoft.

It is always possible to find the locations list on a counts list by entering the counts list number and pressing "Search".

When counting is in progress, first choose the line that you wish to be counted first. Then, move the cursor to the "Quantity counted" field. Enter the quantity counter and press "*Enter*". Automatically, it will jump to the next line. Thus, counting is carried out by entering quantity + enter, quantity + enter, etc.

LogiSoft will during the process graphically mark the scope of deviation or whether the counts match the expected values.

Recount

When an inventory has been completed, one can choose the recount selected locations or choose all locations in which balances (diffs) have been identified. Three buttons are used for choosing which locations that are to

be activated:

All: Add all locations.

Diff: Add all locations with balances.

Selected: Add all locations whose check box is ticked off.

When a new count has been created for a locations the line is assigned a new count number. The column marked with "#" shows the count number. Previous counts are also shown but it is only possible to work on the most recent count.

If you wish only to view the active rows, check the "Active" check box and press "Search".

If counts are carried out on paper lists, a new list is to be printed (using the "Print" button) in order to have the new recount rows.

Step 5 - Complete and Approve Inventory

When all locations have been counted and entered into LogiSoft you can move on to the next step, *Complete*. After this, it is no longer possible to make changes to the inventory. If you discover errors, you must go back to a previous step.

When the inventory has been approved, the name of the person responsible is entered and you can move on to the next step.

Step 6 – Adjustment of Locations

Following approval of inventory, press "Next". The inventory will then reach the stage Closed. From here it is not possible to go back to previous steps, all you can do is view the count and its status.

At this point you will be asked whether you wish to update the locations using the counted values.

When the inventory is closed, all counted locations are updated with a time stamp so that it is possible later on to see when the count was carried out.

It is now possible to print a final report on the inventory.

- It is possible to print a small status that will include the note that has perhaps been added to the inventory order.
- You can print a list of all the lines and the calculated balances.

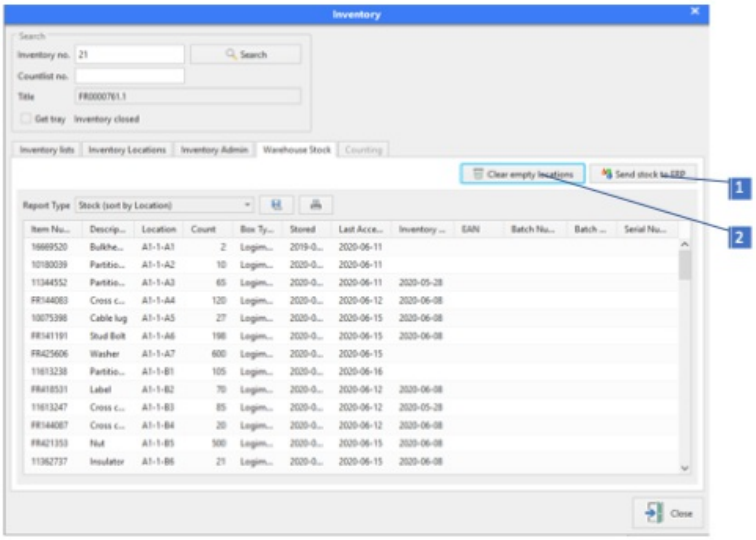
Using the Transaction Log

When the inventory has been completed,a line for each update will be written into the transaction log.

The transaction type is "Stock adjustment". Negative numbers indicate that the location has been adjusted downwards and positive numbers indicate the location has been adjusted upwards. Empty locations will not be included here. If items exist on an apparently empty location, the items must be removed and put away manually.

There will always be a line in the log stating "Item Count". In the quantity column you find the quantity counted.

W Report the Total Stock



The stock can be reported to a host system manually for the "Warehouse Stock" tab. The stock file contains the current absolute stock when the button is pressed and is not related to a specific stock count order.

Host Integration

It is possible to make an integration to a Host System:

- LogiSoft may accept a counting order from the Host. This will typical be a list of articles chosen for some reason to count, often due to an audit.
- The generated stock adjustments can be exported to the Host automatically. This file contains the relative adjustments.

System Information

Transaction Log

In the transaction log, all movements in the warehouse are registered, when the article has been moved, who has performed the action, which orders were underlying the movement etc. This is a very efficient problem resolution tool and is also very useful in compiling statistics. Every single operation where goods are stored or picked in the machines are stored in the Transaction Log. The log is the list of all performed operations and will documents what have occurred.For all registrations also time is logged, the operator's user name, location, items number, order number and quantity.

You can either to show all transactions or a search criteria can be specified, so that only the relevant transactions are displayed. Among the possible search criteria to view transactions for a certain time on a specific product or a specific operator.

Navigation

Keyboard: CTRL-L

Menu: System Information -> Transaction Log

Functions

The Transaction Log shows a variety of search criteria that can be used to select what you want to see, basically lists all the latest transactions.A maximum of 200 transactions are shown in one window. Once search criteria has been changed, press the [Update](or press Enter) to reload the data from the database.

List of transactions are always sorted in chronological order (by time), with the youngest first.

Numbers are displayed as positive when they are inbound to the stored and negative when they are pulled out.

The following functions are available:

Start Date: The first date that appears.Note that if there are more than 200 transactions in the selected time interval, the End Date as applicable.

End Date: Last date for the selected transactions.The top transaction in the list will be the last one occurring before that date.

Box Number: If only the transactions in this box number.

Location Address: If only transactions for this address.

Type of transaction: If only the transactions of this type.What transactions are available may vary. Select All to check all transaction types.

User: If only the transactions of a particular user.

Order Number: If only the operations of this order.

Article Number: If only the transactions for this article.

[Update]: Updates the contents of the table.Note that it may take some time for some questions - there can be many transactions to search through! "Enter" key also acts as Update.

[Export]: Allows you to save the displayed transactions in a file as text or Excel format.

[Clear]: Resets all search fields to their default value.

[Down arrow]: In the lower left corner is an arrow.The move date range as the last date will be set to the bottom line. This feature can be used to display earlier transactions than currently shown, a way to go back in the history of.

Search with "%" and several fields

If you want to search only a specific part of a number / name, you can use "%" for the part to be ignored. For example, 2004% select all orders that begin with 2004 and% 404% select all orders where "404" is part of the number. "%" Can be used for all text search box.

Completed more than one field as search criteria, only those transactions where all criteria are met.

Using the quick functions with the mouse

Some frequently used functions are accessible by right clicking the mouse on a particular line. The following menu is displayed as:

The functions are:

- Open article editor: Open artikle editor with the artikle is on the selected transaction.
- Open orders Editor: Open artikle editor of the order of the selected transaction.
- View only this Part: Put the item number of the selected transaction as search criteria and update the table.
- View only this order: Put the order number of the selected transaction as search criteria and update the table.
- View only this location: Set location address of the selected transaction as search criteria and update the table.
- See all: Remove all the search criteria, the dates will not be changed.

System Log

The System Log displays information about error messages, import of host orders and other information relevant to the servicing and maintenance and an important tool to pinpoint problems. The System Log does not contain information about changes in the inventory, this is covered by the "Transaction Log".

As default all information is saved for ever, but in many cases a job will be defined, that cleans up the log after a period, for example 12 months.

Navigation

Menu: System Information -> System Log.

Short-Cut: CTRL+Y

Functions

The log is shown in chronological order with the last entry at top.

It is possibly to filter the log, so only a specific time internal is shown, only logs generated by some modules or narrow by some specific error codes.

Choose also to view all types of messages or only errors:

Use “Error Source” to see only one of the sources of error messages.

To get more details about a message, double click on the row and a window will be opened, with more detailed information.

Box Statistics

There is an ongoing need to monitor how the available location types are used. The box statistic provides a list over which location types have been created, in which zones they are used and how many are in use and free. Moreover the free and used space and area are calculated.

Navigation

Menu: System Information -> Box Statistcs.

Short-cut: No

Functions

Shows a table over used and free locations group by location types. Moreover it is possible to show all zones and one specific zone. The bottom line is a sum of all available types. So for example if the the [Zone] drop down box is set to “All Zones”, the bottom line shows the total available number of locations, free and occupied for the current site.

Please note that a location is occupied, if an article is assigned the location, the statistic does not taking into account, if the locations are full or just partly used.

Zone: Choose here between Ã³ne zone or all.

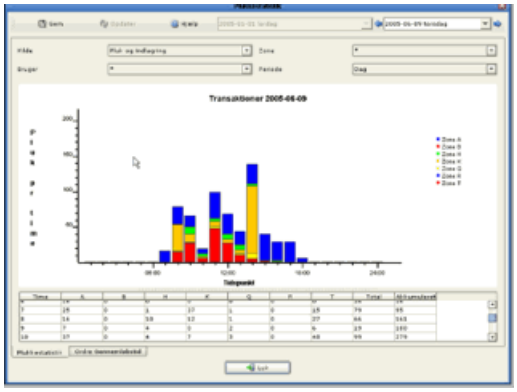
Stock Report

The Data Browser

Order Statistics

The Order Statistic function is used to see information about the picking rate.Â For example, how long does it take for the warehouse from an order is received until it actually is picked.Â It is an effective tool to monitor if the warehouse is working satisfactory and how changes influences on the output. Statistical tools are important for the ongoing optimization of warehouse operations. It is for instance possible to see:

- Picking frequency divided up into zones/users/order types and time intervals.
- Order lead times.
- Picking frequency for trays in vertical lifts.



Here is the number of transactions divided up into how many per hour for one day. The best utilization of the warehouse is achieved by operating at full capacity for as short a time as possible.

Warning!

Some of these statistical calculations are very demanding and can load the database seriously. Therefore, avoid prolonged use of statistical functions when LogiSoft is in normal operation, since it could potentially cause longer response times for users.

Navigation

Menu: System Information > Picking Statistics > Order turnaround (tab).

Shortcut: No

Functions

In the upper part of panel select the data to be displayed and how.

Date from: Only orders completed >after that date are included.

Data: Only orders completed before that date included.

Source: Choose here whether to display pick orders put-away orders, etc.

Order Form: Select the specific type of order to be displayed.

Display Type: Select whether to display a histogram or a general average.

[Save]: Save the information in a file (text or Excel).

[Update]: Updates the graph and table.Can only be used when the setup is changed. Updates the panel even after approx. 5 seconds if there is pressure within.

Functions (Histogram)

Histograms show the selected orders in the graph and the table and read as:

1. The blue bars are the number of orders that are completed at the given time.If, for example, the resolution is "day", every column displayed are the orders for the current day. The number of the orders shows on the left y-axis. For example will the column for "5 days" to show how many orders were completed within 5 days.

2. The black graph shows the summed number converted to percent.Used to see how many orders were completed within a given time. Percent is on the right y-axis. Example, if you want to see how long it takes before 60% of orders are completed you can read the summed graph out for 60% (approximately 5 days).

The same information as the graphs shown can also be seen in the table.

You receive up to a maximum of 100 hours or 100 days, so in some cases, the accumulated numbers do not reach 100% (if there are orders that have been more than 100 days on the way).

Features: Average

The average is calculated as a standard average over the specified period (start and end date).

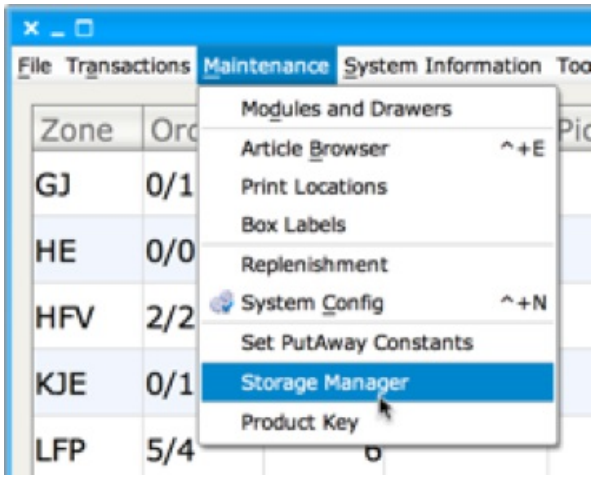
- The blue boxes show the number of orders for that period, the number shown on the left graph.
- The black graph shows the average number of days for the order and read on the right graph.
- The gray graph is a trend or tendency graph showing the trend over the period in question, read on the right graph (calculated as least-mean-square of the average).

Storage Manager

The Storage Manager is a tool to optimize the placement of articles in the warehouse. It can for example be used to pin-point articles stored at wrong locations and generate internal transfer orders to move the articles to new locations.

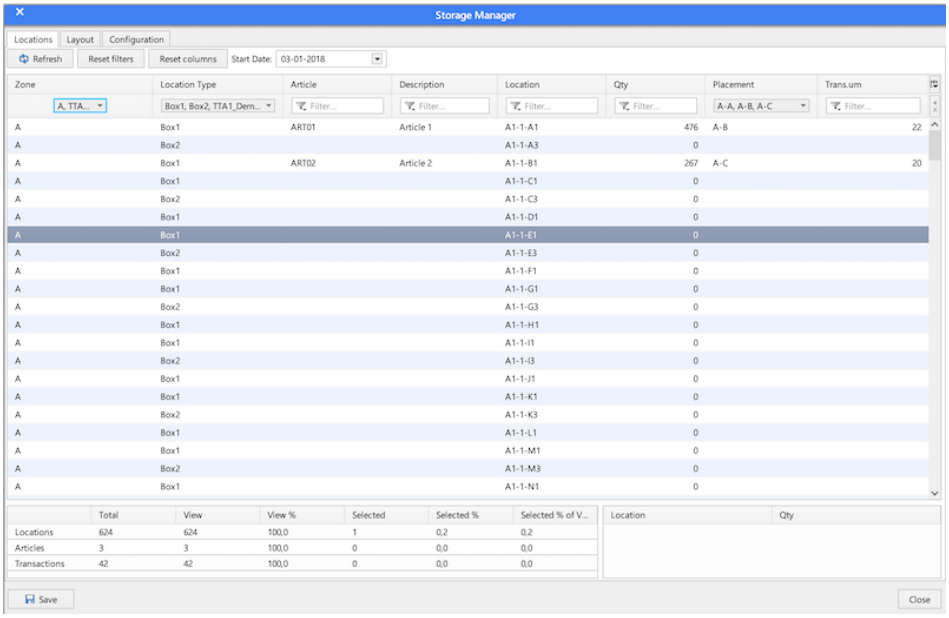
Navigation

Menu: Administration -> Storage Manager



Basic Display

The basic display is a list of all available locations in the warehouse. For each location, basic information like articles stored, quantity and location address are shown, but also calculated data like number of transactions in a period, ABC classification and similar information useful to analyze the use of the warehouse. In combination with filtering and sorting of the data, it is a powerful tool to improve the efficiency of the warehouse.



Please note that it can take some seconds before the Window opens. It is due to the fact, that all data are fetched from the database at startup.

[Refresh] : Reload data from the database, using location filter, article filter and start date.

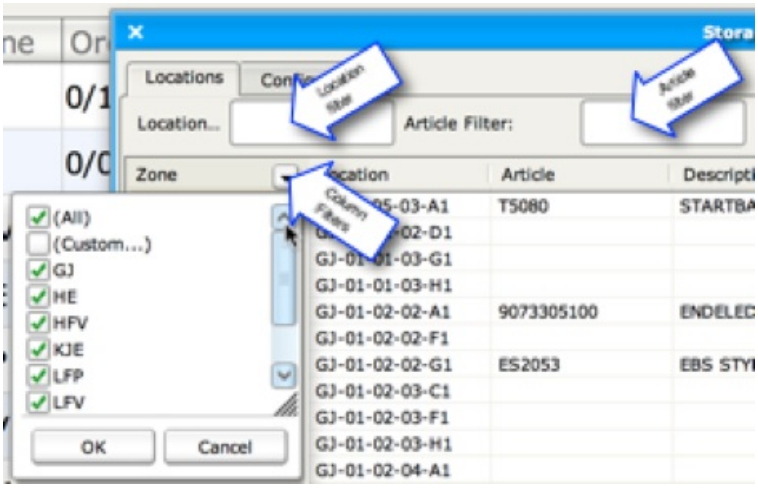
[Reset] : Reset all setups and reload data.

**Start Date **: All statistics will be calculated from this date until today.

Filtering the view

For many columns a filter function is available, if supported the down-arrow on the column is used to open the filter dialog.

It is also possible to filter locations and articles by an expression. Use "*" as a wildcard. For example could "*-5-*" in the location filter, show all aisle 5.

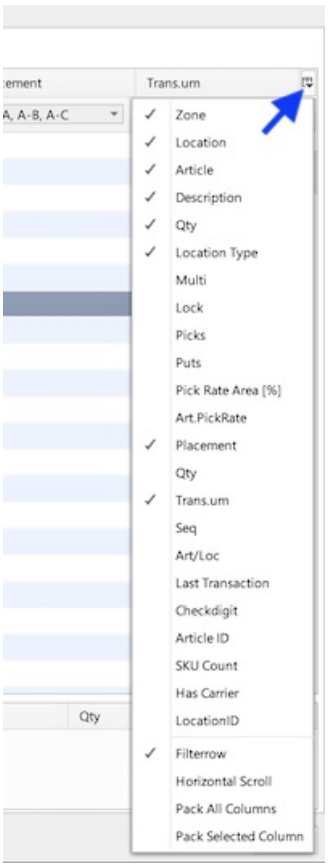


Sorting the data

Click on the column to sort by this column. Multiple sorters can be specified by holding down the shift key.

Selecting columns to display

The Column button is used to select which columns should be displayed.



Zone:

Location:

Article:

Description:

Qty:

Location Type:

Multi:

Lock:

Picks: Number of picks from the location.

Puts: Number storings to this location.

Pick Rate Area: ABC classification of this location.

Placement: Combined value of location and article ABC value. For example A-A is an A article on an A location (good), C-A is a C article on an A location (poor).

QtyLoc: Number of locations this article is stored on.

TransSum: Total number of transactions to this location.

Seq: The sequence number used when creating a picking route.

Art/Loc: For mixed locations with multiple SKUs, this is the number of unique SKUs on this location.

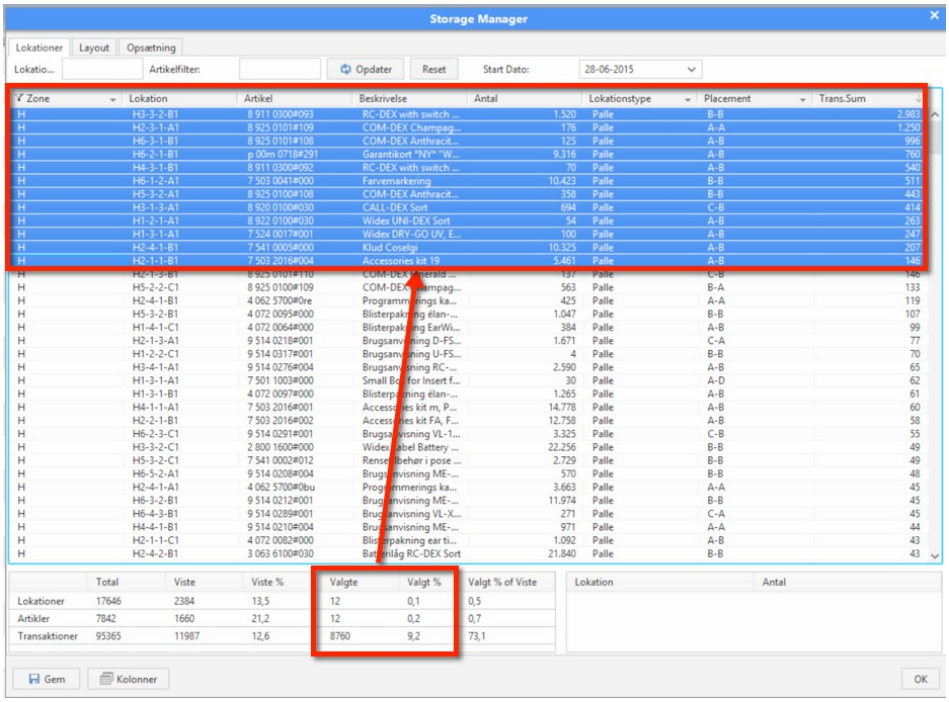
Check Digit: A short number used for easy confirmation for pick-by-voice systems.

SKU Count: If larger than 1, it indicates that more than one SKU have been stored on this location in the specified period. Due to this, it can be difficult to use the stastics.

Location ID: This is the internal id in the database for this location.

Statistic Information

At the lower left of the main window, some statistical values are automatically calculated.



The following values are available, for locations, articles and transactions:

Total: Total number of articles, locations for the whole warehouse and all transactions for the selected period.

View: Number of articles, locations and transactions for the currently filtered locations. For example if only zone A is displayed, it shows the numbers for zone A.

View %: Viewed numbers compared to total in %. For example if zone A is displayed and the Article value is 37% it tells that 37% of the articles are in zone A.

Selected: Like View, but instead the current selection (blocked locations).

The table in the lower right shows other locations containing the same article as the currently selected row.

Saving to Excel

Press [Save] to save the current data set to an Excel file for further processing.

Action Menu

Right click with the mouse on a row and a number of tools are available.

There are short-cuts to the Article Editor, logs and it is also possible to change properties for the selected location(s).

To move the article from a location, choose "move article". This will generate an internal pick-and-store order for reallocating the articles.

Examples of using the Storage Manager.

Find slow-movers occupying good locations

If slow movers are stored in easy-to-pick locations, it is waste of good space. There will be very few transactions here and the article will perhaps stay forever if nothing is done.

To identify the locations, use the filter to show the slow moving articles on good locations, in this example it is placement=A-C.

Important articles

Typical a few articles, is responsibly for most of the transactions. This can be shown this way:

1. Here only zone E is displayed, using the Zone filter.
2. Show the transaction sum.
3. Sort by transactions, click two times to sort descending (highest value first).
4. Select from the top rows, until the "selected % of view" shows 80% of transactions.
5. Read the number of selected articles/locations. In this article only 8 articles or 8.2% is responsibly for 80% of the transactions!

Using Label Printers

LogiSoft has a system for printing barcode labels in various contexts. The system does not format the label using a Windows driver, but requires the label to be formatted in the native language of the used printer. Using the native language make the printing faster, more stable and provides better print results. Thus there is no need to install a Windows driver for the printer. An exception to this is if the printer is accessed using a Windows Share, in this case a simple text printer must be installed.

To print a label, the following must be configured:

- A label printer must be available, connected directly to the PC from where the print is done, or a printer connected to the local network.
- The printer must be defined in LogiSoft.
- A layout must be defined for the printer. This defines how the label will look like and which commands that must be send to the label printer.
- A mapping between the layout and the context where the layout should be used.
- For automatic printing, some configuration may also be required for the specific function where the label is needed. It is for example possible to print a picking label for each picked order line, this requires a configuration of the "Floating Batch Pick" window.

The defined templates can be reused between all PCs. Printer setup and configuration of how each context is printed, must be defined for each printer and PC.

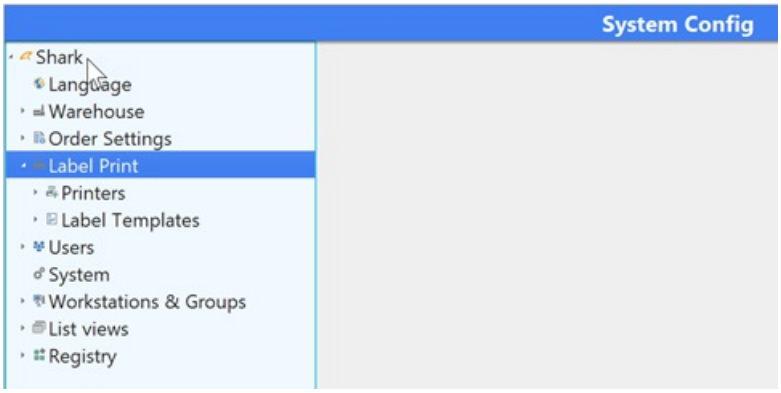
The standard labels that follows the system and the documentation are based on the Zebra printer language "ZPL". ZPL is widely used and also supported by other brands. Other printer languages may be used, but is not covered by this documentation.

A printer named 'PrinterDefault' is configured as default which also maps all contexts to their template counterpart.

A built-in preview printer is available for test purposes. It will pop-up a window showing the label in a window. It only works for ZPL formatted labels.

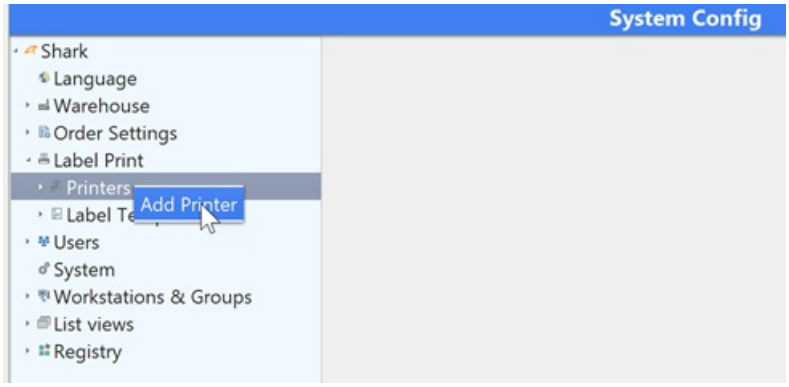
Navigation

Menu: Administration > System Configuration > Label Print

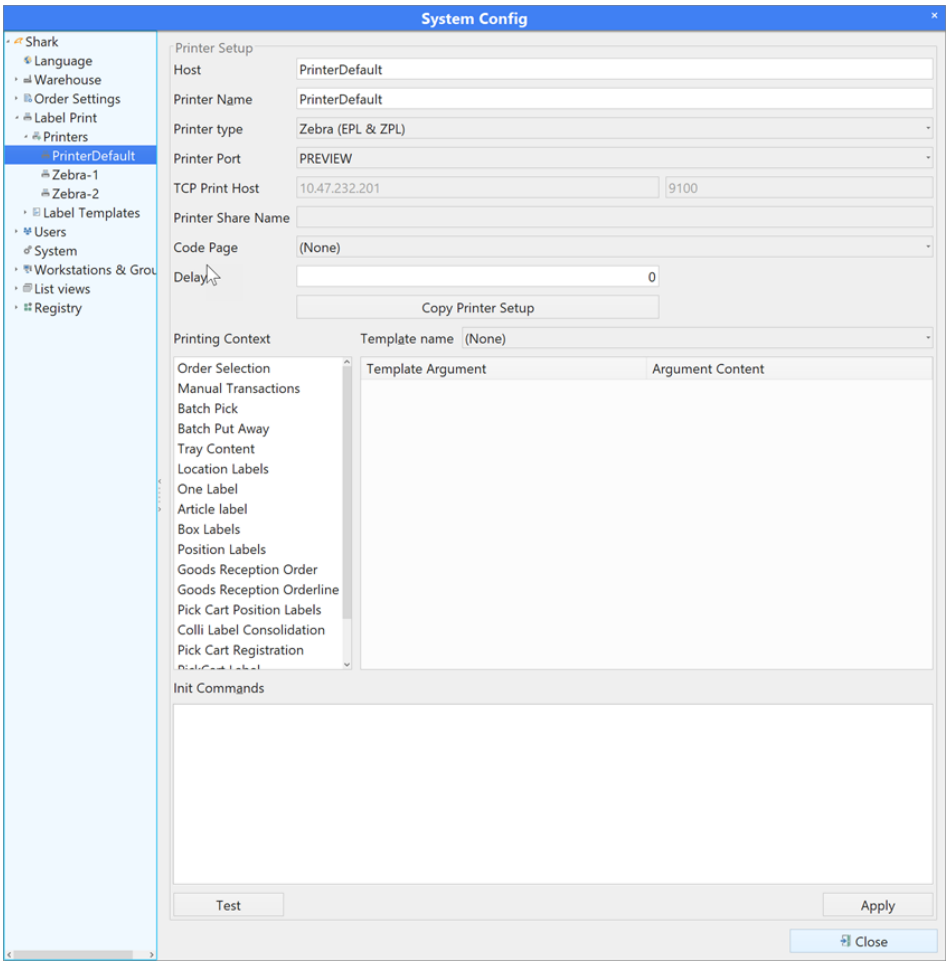


Adding a Printer

To create a new printer, right-click Printers and select add printers.



Then fill in all information about the printer.



Host: This parameter is used for printing from the PDAs, where the software is running in a web browser. The PDA cannot print directly and this is handled by a PC or server and the name of that PC is the "Host".

Printer Name: Name of the printer identifying the printer. The name must be unique within the host.

Printer type: Choose which type of printer used. This controls how printer commands are sent to the printer and also ensure that only templates defined for that printer type are presented for use in the relevant contexts.

Printer Port: Select the printer port on the PC printer.

The following port types can be chosen:TCP, SHARE, DOCUMENT & PREVIEW TCP or SHARE requires the fields explained below to be set. PREVIEW can be sued for af WYSIWIG view aof the label if you are experimenting with a layout.

TCP Print Host: IP address or name and port, for TCP/IP printers connected to the network. Use 9100 as default port number.

Printer share name: Define the LogiSoft Name if Printer Port is set to «Share». It requires a share to be defined for the printer and a windows printer driver to be used. Normally the 'Generic Text' printer driver should be used. This is the only way to connect for example USB based printers.

Code Page: Defines the mapping of the UniCode characters in LogiSoft to the printer format. Is country specific characters printed with wrong codes (like «ÆØÅ»), this is typical the codepage that is wrong.

Delay: Delay between each label that is printed. If no flow control is used, there is a risk that printer buffer runs full during long printouts. If that is an issue, a delay in milliseconds can be defined between each printed label. Set the delay so the printer has enough time print before the next label is sent.

Copy Printer Setup Can be used to copy the settings from another already defined printer.

Printing Context: can be used to select which label template should be used in any given printing context. For each context you can define which context dependend argument can be printed. First you select the context and then you select the 'Template name' to be used. Finally yo set the arguments.

Init Commands: It is possible to set some special printer commands, that are sent the first time the printer is used. This can, for example be setup type, label size, etc. Leave the box blank if not used and do NOT use it for testing label templates if you do not remove the commands again. It should only be used for initialisation commands.

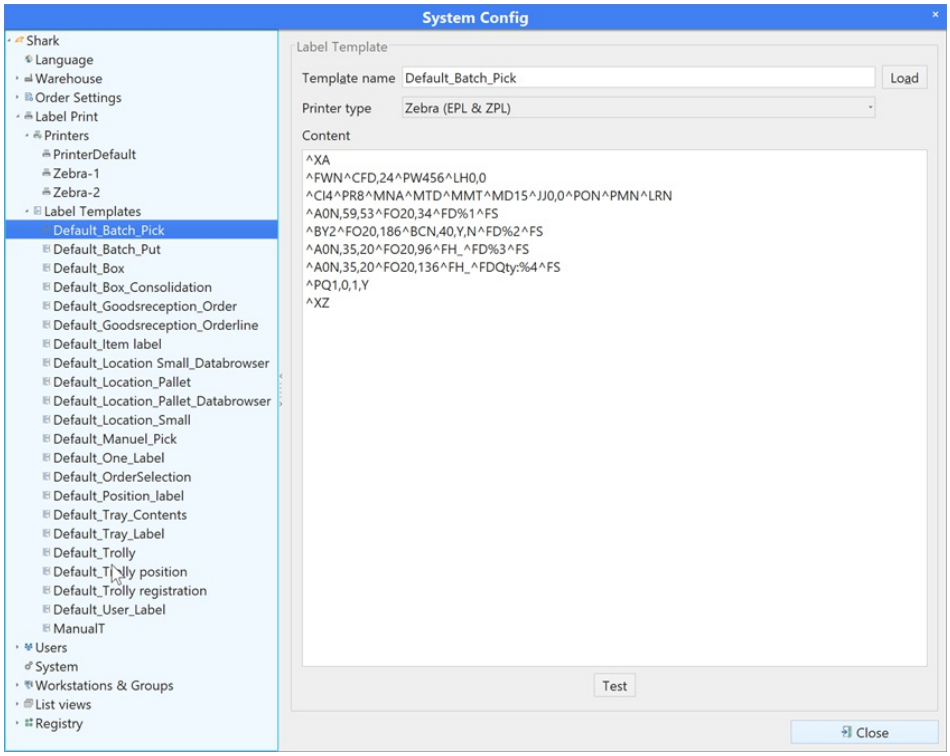
[Test]: Print this button to send the Init Commands.

Label Templates

This defines a standard template for a label. What the template should look like, depends entirely on the printer used and requires documentation for the actual printer. Third-part software can also be used to define the label template.

In the template with printer commands, *placeholders* are used to define where the final text to print should be put. Use %1, %2, %3, etc. to print parameter 1,2,3. To define the maximum length of the inserted text, use the format: %<number>L<length> to set the maximum field length. Append a "U" to the placeholder, for example %1U to force the inserted text to be in upper case characters.

The system already contains templates for all contexts in the ZPL-II printer language.



Template Name: Name of the template.

Printer Type: Select which type of printer used. Must be equal to the created printer.

Content: The actual commands sent to the printer.

[Test]: When you press the [Test] button, sent the custom commands in content to the printer.
This is a quick way to check the created layout. Instead of the final text, it will print %1,%2, etc. where the text will eventually be inserted.

Multiple Printers in 1 Automat Zones

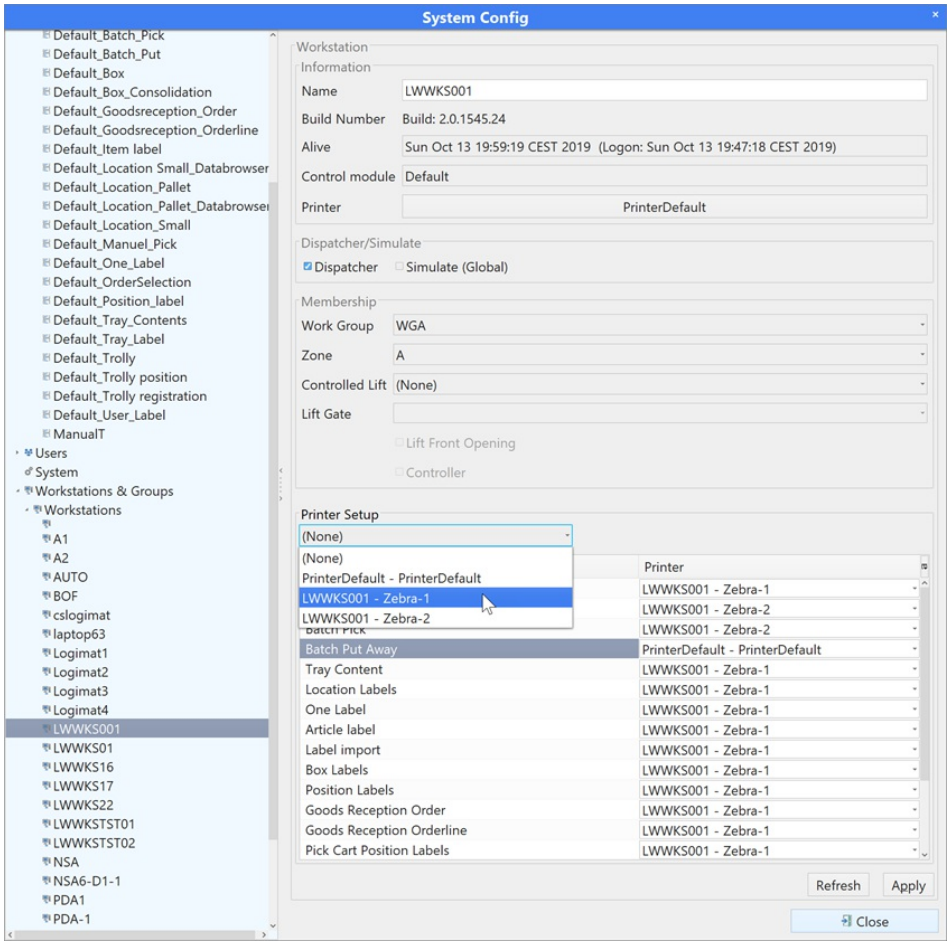
When batch picking labels are used for each pick, it is convenient to have more than one printer in an automat zone to avoid the possible long distance to the label printer. Typical 1 printer is used for 2 automats, but it is also possibly to have one printer for each automat. To configure this, do the following:

- Add all printers to each PC in the zone,
  where the name of the printer is the same as
  the Automat. For example, if the one automat is named "A1"
  (as seen in the location address), the printer should be named "A1".
- Set the configuration flag MultiplePrinters=true for the Floating
  Batch Window (in the LogiSoft registry).

Workstation printer setup

On each workstation you can define one or more printers to be used in any given context. If a context is selected in the 'Printer Setup' dropdown all contexts will be using that printer. If '(None)' is chosen you" be

able to choose any defined printer for every context.



Label Printing Contexts

Simple Label

Print a simple, random label. Only one parameter can be stated.

The function can be used e.g. for printing of control labels used for initiating picks, printing label, etc.

Note that there must be a label template defined for this label type and a label printer connected for this function to work.

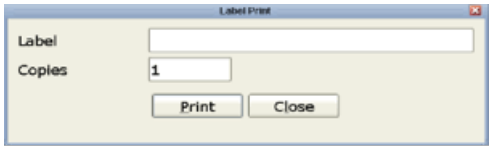
Navigation

Keyboard: CTL+L

Menu: Transactions -> Print Label

Functionality

- Type the desired text.
- Type the desired number of copies.
- Press [Print].
- Continue with more labels or press [Close] when you have finished printing.



Print an Article Label

Print a label for a specific article number.

Note that there must be a label template defined and a label printer connected for this function to work.

Navigation

Keyboard: CTL+T

Menu: Transactions -> Print Item

Functionality

- Type Item Number.
- Type the desired number of copies.
- Press [Print].
- Continue with more labels or press [Close] when you have finished printing.

Location Labels

Function for printing location labels for a selected area of the warehouse, for example a module, aisle, tray or for the whole warehouse. It is not possible to print a single labels. The purpose is to mark up the locations with labels before use.

Navigation

Menu: Administration > Print Locations

Keyboard: There is no short-cut for this function

Printing Labels

Either select to "Print All" or define what to print.

[Print All]: Print a label for each location in the warehouse (this can be a lot labels!).

Zone from, to: Specify which zones to print. Enter for example "A" "A" to print from Zone A.

[All Zones]: Print all existing zones

Aisle from, to: Specify the range of aisles that should be printed (both included).

[All Aisles]: Select this to print all aisles.

Module from, to: Specify the range of modules that should be printed (both included).

[All modules]: Select this to print all modules.

Trays from, to: Specify the range of trays that should be printed (both included).

[All Trays]: Select this to print all trays in the specified zones and aisles.

[Print]: Start printing.

[Close]: Close the window.

Special Barcode Labels

Used for printer various labels for boxes, locations, pick carts, etc. Barcodes used in LogiSoft contains a hidden code that allows LogiSoft to recognize the label type. if a barcode is scanned on for example a pick cart, LogiSoft knows this is a pick cart and can react appropriate without opening a special menu.

To print the special labels, a template must be defined and a label printer must be available.

The following label types can be printed:

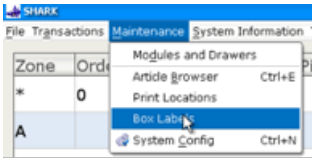
- Box labels.
- Position labels.
- Pick Cart labels.
- Pick Cart Position labels

- Sort Position labels.
- Tray Labels.

Navigation

Menu: Administration > BoxLabels

Keyboard: No short-cut available for this function.



Printing Labels

Label type: Choose which label type to print.

Postfix: En fix text that will put in the front of the label.

Range: Choose the internal of labels to print. For example write 1 and 5 to print labels with number 1,2,3,4,5.

Digits: Choose how many digitis in the number. If there are more digits than the length of the number, «0» vil be inserted.

Postfix: A fixed text to put after the number.

Copies: Number of labels to print, default is «1».

Example: Printing Position Labels

Position labels are used as temporary locations for boxes containing orders. To make 10 position labelsname P-01 > P-10 enter the following:

Label Type: Position Labels

Prefix: P-

Range: 1 and 10, mark «leading zeroes».

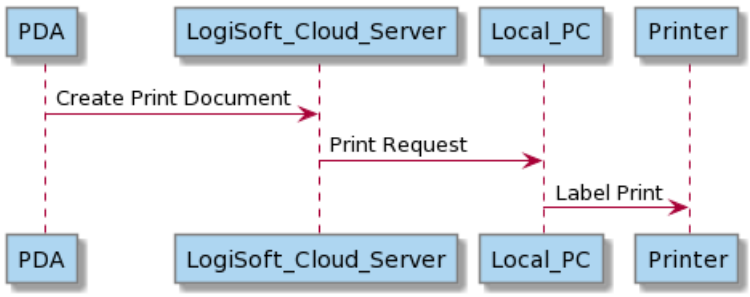
Digits: 2

Postfix: empty

Copies: 1

Printing from PDAs for LogiSoft Cloud

PDAs cannot print directly to a printer and for cloud installations, the server has no access to the internal network where the printers are. To circumvent that problem, the LogiSoft Cloud Server send printing events to a PC client that are on the same network as the printers. The PC client then redirects those printer events to the local printer.



How the label is printed

Configuration

1. Setup a local printer

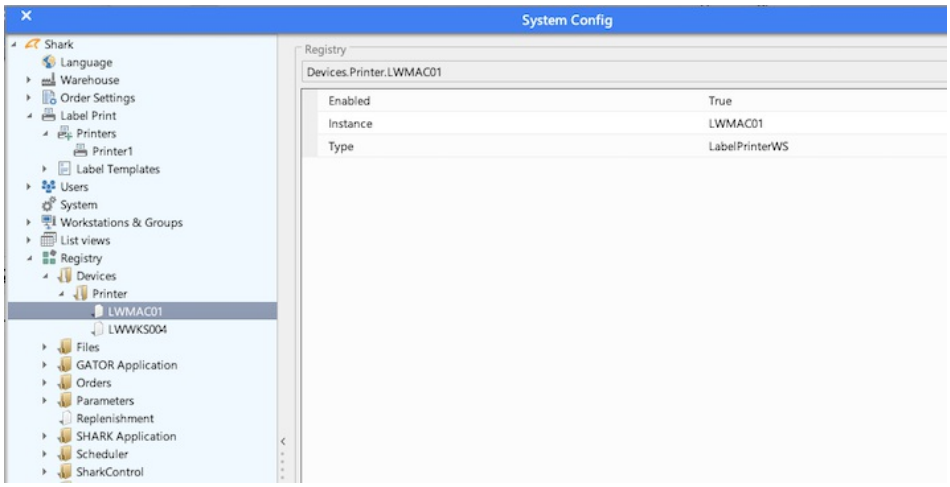
Setup a local printer the usual way.

The Host field is filled with the name of the PC from where the label will be printed. This is also from here, the layout and context mapping are defined.

2. Configuration of the Printer Server

On the PC from where the label is printed, a printer module must be running. This is a LogiSoft Control module with the following module running:

- **Type:** LabelPrinterWS.
- **Enabled:** true
- **Instance:** Name of the pc from where the printing will be done (must be a local PC). If the printer module is running as a service, set the Instance name to "Server".



Configuration of the driver for the label printers.

3. Select the printer in the PDA application

To print from the PDA application, is like any other printer, just select which printer to use.

Preview

There is a Printer Port called *Preview*. This is a optional feature to preview ZPL formatted labels in a window, without actually printing anything. It make use of an external web service (http://labelary.com) and can be used to preview how the label actually will look like. It will not always make fully correct results and there is no guarantee of availability.

The used Barcode Format

The system makes use of special formatted barcodes that allows the software to recognize the function of the code. The general format of these barcodes is:

-+#<2 digit type code><value>

A picking box has for example the type "02" and a box with number 0765 will have the following barcode: -+#020765

The barcode must always be followed by an <enter> character.

The scanner must be configured so it is able to scan the special codes (-+#) correctly in case these barcodes are used.

To check if a scanner is configured correctly, try to scan a barcode in for example Notepad and check if the characters are correct and that the barcode is followed by a newline character.

Type	Code	Comments
Location	01	BARCODE_LOCATION
Picking Box	02	BARCODE_BOX
Flow rack position	03	BARCODE_BOX_POSITION

Type	Code	Comments
Pick Cart	04	BARCODE_PICK_CART_NUMBER
Position Pick Cart	05	BARCODE_PICK_CART_BOX_POSITION
Reserved	06	BARCODE_TRAY_NUMBER
Reserved	07	BARCODE_ARTICLE_NUMBER
Sorter Position	13	BARCODE_SORT_POSITION
Command	14	BARCODE_COMMAND

Note that most scanners actually send the key pressed code and not the actually character. This means that the barcode scanner must be configured for the keyboard layout and language.

The barcode prefix can actually be changed to something else. Look in the registry under "LogiSoft Application > Defaults".

Manual Orders

The Manual Order window is used for creating orders without an import from a Host System.

Client Scripting

Groovy scripting is supported for some of the LogiSoft Windows. This allows for modifications to the layout and display as well as changing or adding to the functionality. The script works as an extension to the existing Java code and can make use of general resources to the LogiSoft client. To make script extensions, you should have knowledge about the following technologies:

- Groovy and Java
- Swing to implement graphical extensions.
- The API interfaces to LogiSoft.

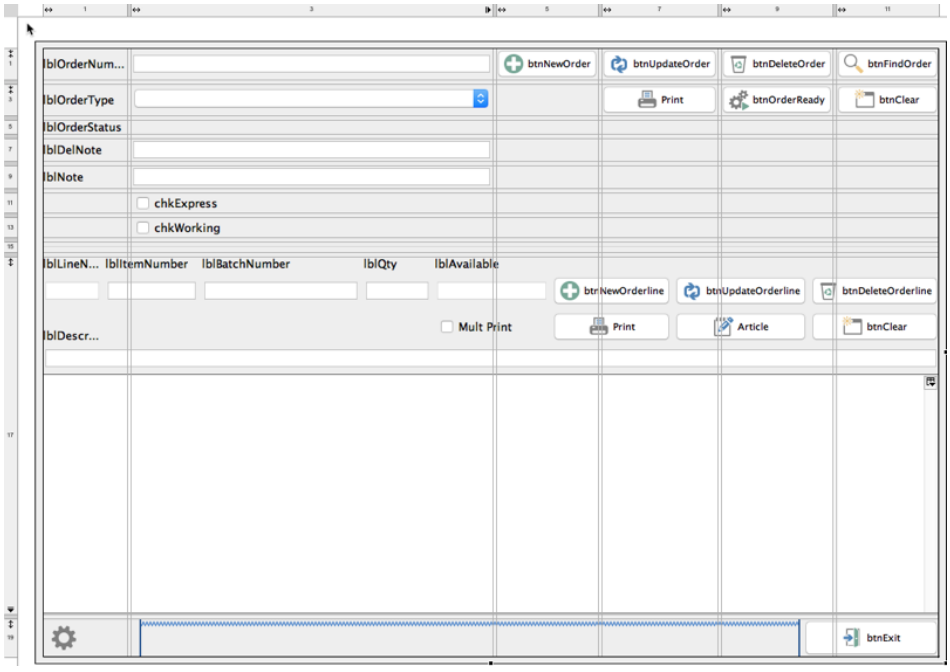
How to Edit Scripts

The scripts are stored in the database. There is a build-in script editor, that can be reached from the configuration menu in the related window or from a common Script Editor found under the *Files* menu.

Goods Reception

Panel Layout

The panel layout can be used to place new graphical elements in the window.



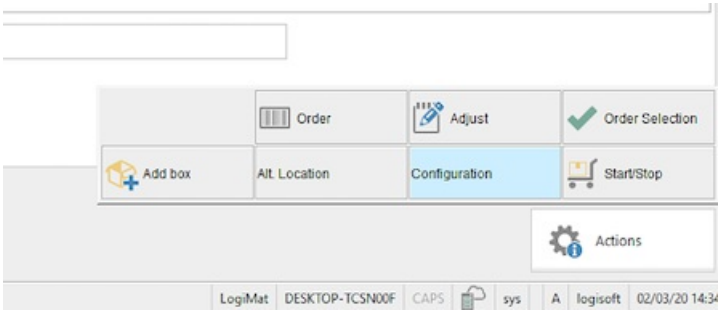
Extension Class

Order based Pick and Put (Floating Batch Pick)

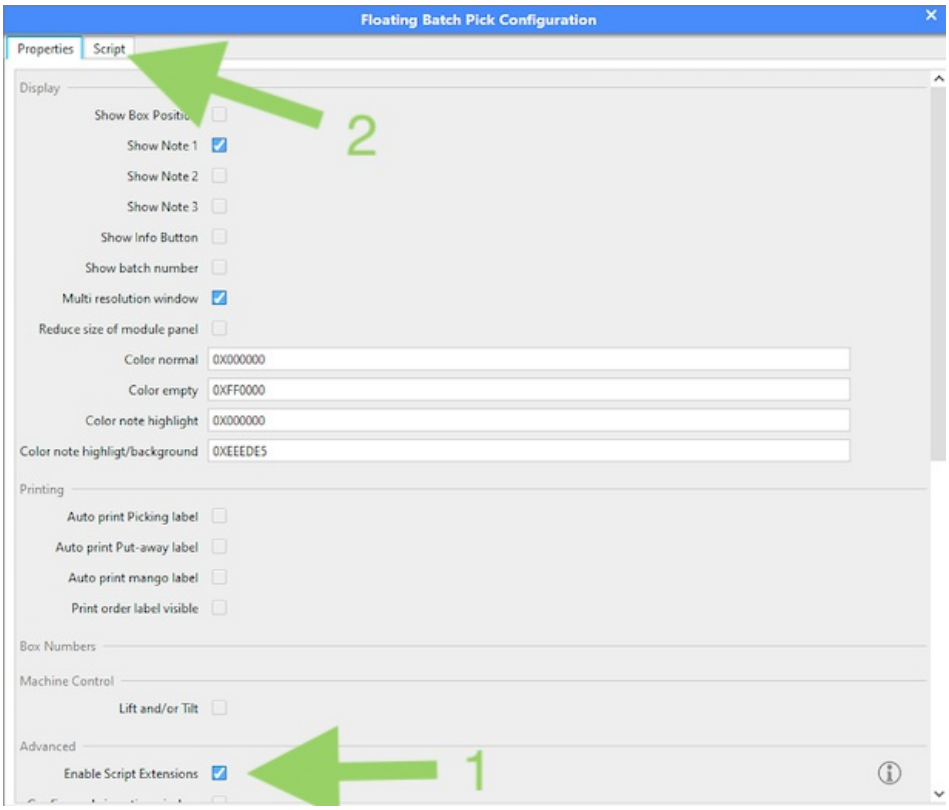
The Batch Picking Window can be customized by scription.

To create the script:

Open the configuration window



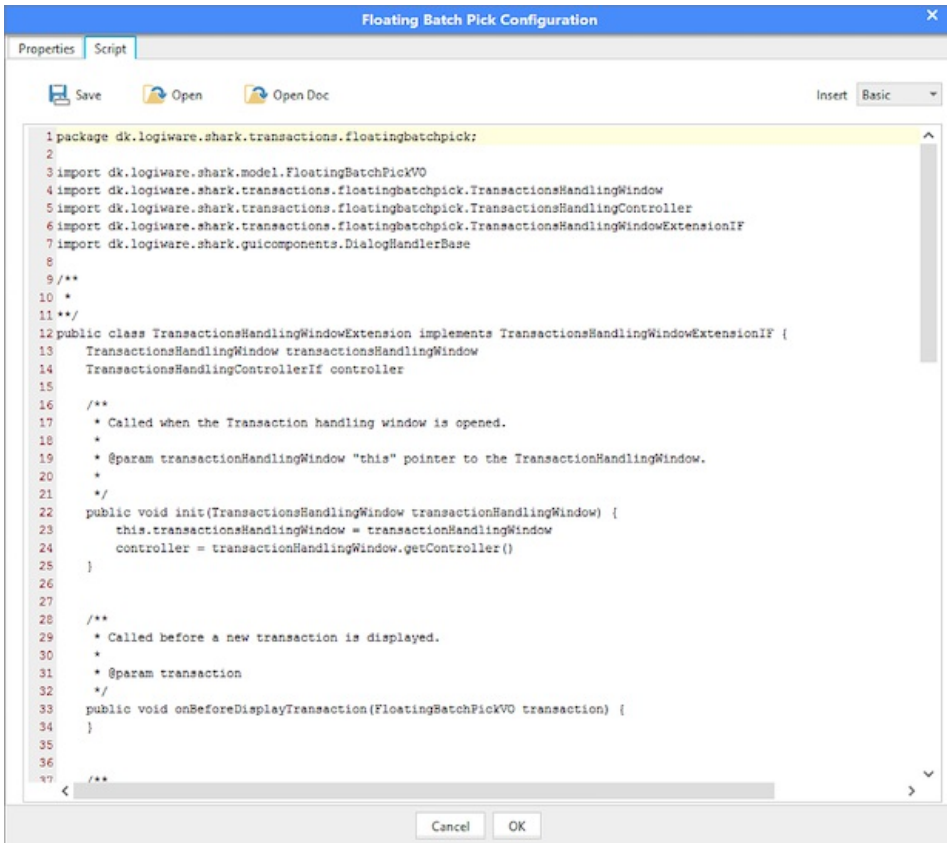
Enable scripting and open the editor



Edit and save the script

The script can now be edited. The first time a default script will be assigned.

When the OK button is pressed the script will be saved and reloaded, it is not necessary to close the batch order window to make the changes to take effect. If there are compilation errors, they will show up and must be fixed.




```
package dk.logiware.shark.transactions.floatingbatchpick;

import dk.logiware.shark.model.FloatingBatchPickVO
import dk.logiware.shark.transactions.floatingbatchpick.TransactionsHandlingWindow
import dk.logiware.shark.transactions.floatingbatchpick.TransactionsHandlingController
import dk.logiware.shark.transactions.floatingbatchpick.TransactionsHandlingWindowExtensionIF
import dk.logiware.shark.guicomponents.DialogHandlerBase
import dk.logiware.shark.scripting.PanelScriptExtension
import dk.logiware.shark.transactions.floatingbatchpick.QuickOrderDialog
import dk.logiware.shark.SharkSystem;
import dk.logiware.shark.guicomponents.DialogHandlerDialog;
import dk.logiware.shark.guicomponents.LogiSoftDialog;
import dk.logiware.shark.guicomponents.LogiSoftDialog2;
import dk.logiware.shark.guicomponents.LogiSoftDialogHandler;
import dk.logiware.shark.guicomponents.LogiSoftPanelIf;
import dk.logiware.shark.guicomponents.LogiSoftTablePanel;
import dk.logiware.shark.model.GoodsReceptionHandler;
import dk.logiware.shark.transactions.manualorders.ManualOrderHandler
import dk.logiware.shark.model.ItemVO
import dk.logiware.shark.model.OrderVO
import dk.logiware.shark.model.TransactionsHandlingHandler
import  dk.logiware.shark.model.OrderReleaseHandler

/**
 *
```

```
**/
public class TransactionsHandlingWindowExtension implements TransactionsHandlingWindowExtensionIF {
    TransactionsHandlingWindow transactionsHandlingWindow
    TransactionsHandlingControllerIf controller

 /**
  * Called when the Transaction handling window is opened.
  *
  * @param transactionHandlingWindow "this" pointer to the TransactionHandlingWindow.
  *
  */
     @Override
 public void init(TransactionsHandlingWindow transactionHandlingWindow) {
        this.transactionsHandlingWindow = transactionHandlingWindow
        controller = transactionHandlingWindow.getController()
    }


 /**
  * Called before a new transaction is displayed.
  *
  * @param transaction
  */
     @Override
 public void onBeforeDisplayTransaction(FloatingBatchPickVO transaction) {
    }


 /**
  * Called when a new transaction is displayed.
  *
  * @param transaction
  */
     @Override
 public void onAfterDisplayTransaction(FloatingBatchPickVO transaction) {
    }


 /**
  * Called when text is entered into the scan field.
  * Works as a filter, returns the text unmodified unless modifications
  * are required to the entered text.
  *
  * @param text
  * @return
  */
     @Override
 public String onTextEntered(String text) {
        return text
    }
```

```
/**
 * Called when a location in the tray view is clicked.
 *
 * @param location The location in the Tray View (eg. A1 or C4)
 */
   @Override
public void onTrayViewClicked(String location) {}

  /**
   * Called just before the transaction is confirmed.
   */
   @Override
  public void onConfirmTransaction(FloatingBatchPickVO transaction)  {;}

  /**
   * Called when the order is completed.
   *
   * @param transaction
   */
   @Override
   public void onOrderDone(FloatingBatchPickVO transaction)  {;}

   public void onCreate(DialogHandlerBase content) {;}
   public void onCreateWindow(){;}
   public void onOpen() {;}
   public void onClose() {;}
   public void onCloseWindow() {;}
   public void onDestroy() {;}
}
```

Examples

Create an order from a barcode

This can be used to create for example a Kanban order from a barcode that contains article number and quantity.

```
/**
 * Called when text is entered into the scan field.
 * Works as a filter, returns the text unmodified unless modifications
 * are required to the entered text.
 *
 * @param text
 * @return
 */
   @Override
public String onTextEntered(String text) {

      if (text.startsWith('KAN')) {
         def body = text.substring(3)
         def tokens = body.split('#'
         def article = tokens[0]
```

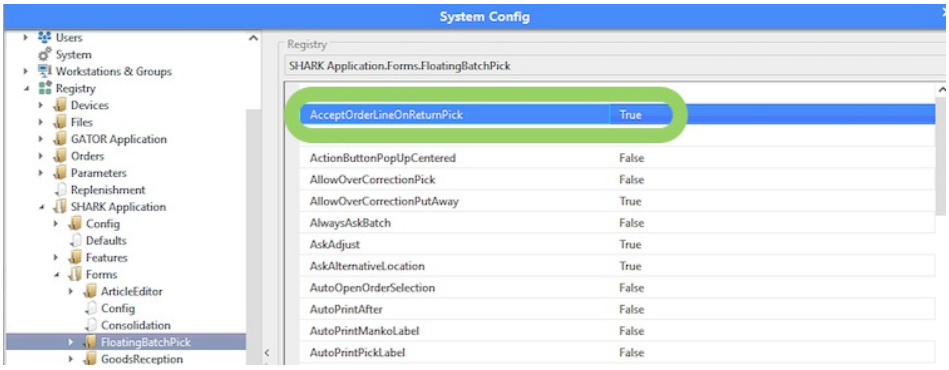
```
        def qty = Double.parseDouble(tokens[1])

        println "Scanned kanban label for $article qty=$qty"

        // Get the ItemID for the scanned article
        ItemVO[] voItems = ManualOrderHandler.findItem(article, null)

        // Create an order for this article. The order type is 105 and it has AutoRelease enabled
        OrderVO voOrder = ManualOrderHandler.newOrder(null, 105, false, null, null);
        ManualOrderHandler.newOrderline(voOrder, voItems[0], null, qty);
    ManualOrderHandler.orderReady(voOrder);

        // Activate the just created order
        TransactionsHandlingHandler.setWorkingOrder(voOrder.getID(), true);
        TransactionsHandlingHandler.startPick(voOrder.getID());

        // To make a dispatch - forces the client to read orders up from the database
        controller.ordersDeleted()

        // The client should not react to this input
        text = 'IGNORE'

    }
      return text
}
```

Remove confirmation check for some picks

This snippet will allow simple confirmation for orders that do not have a box assigned to the order. This could be if most orders are picked by a pick cart with boxes and with confirmation done by pressing a pick-by-light key, but a few orders are picked with a simple activation of a single order.

```
public void onAfterDisplayTransaction(FloatingBatchPickVO transaction) {
  // If the transaction has no box number, simple accept mode is enabled
  if (transaction.getBoxNumber() == '') {
    println "Disable box confirmation"
    controller.transactionValidator.setDone(0)
  }
}
```

To make it work, the parameter below must also be set:



Manual Transactions

```
package dk.logiware.shark.transactions.manualtransactions;

public class ManualTransactionScriptExtension implements ManualTransactionScriptExtensionIF {

 private  ManualTransactionsView view

 public void onCreate(ManualTransactionsView manualTransactionsView) {
   view = manualTransactionsView}

 public void onCreateWindow() {}

 public void onOpen() {}

 public void onClose() {}

 public void onCloseWindow() {}

 public void onDestroy() {}

 public String onArticleEnter(String text) {
       return text
 }

 public String onLocationEnter(String text) {
   return text
  }

 public boolean onNewLocation() {

  }

 public boolean onAction() {

  }
}
```

Fields

Field	Set	Get	Notes
Article Number	view.txtItemNumber.setText(..)	view.txtItemNumber.getText(..)	
Article Description	view.txtItemName.setText(..)	view.txtItemName.getText(..)	
Location	view.txtLocation.setText(..)	view.txtLocation.getText(..)	
Qty	view.txtQty.setText(..)	view.txtQty.getText(..)	

Scanning of article numbers

The default behaviour of the enter key in the article field is to search for information in both article number and description field. This may conflict with a possible scanning of article numbers with old content in the description field.

The following code will prevent this by clearing the article name field before the search :

```
 public String onArticleEnter(String text) {
  view.txtItemName.setText("")
  return text
}
```

Initialization Script

When the client application start, it is possible to execute a script. The script must be named "SharkAppInit".

Examples of init scripts:

Rename the PC to something else

```
 import dk.logiware.shark.SharkSystem
import dk.logiware.shark.system.Globals


public class SharkAppExtension extends SharkAppExtensionBase    {

   @Override
   public void init() {
      SharkSystem.setPCNameCommandline("DemoPC1")
      Globals.reconnectDispatcher()
   }
}
```

Add a new menu entry

Example of adding a new menu entry with an action that will be executed when the menu is selected.

```
 import dk.logiware.shark.SharkSystem
import dk.logiware.shark.SystemMenu
import dk.logiware.shark.ActionHandler
```

```
import dk.logiware.shark.ActionHandler.Listener
import dk.logiware.shark.constants.*
import javax.swing.AbstractAction
import java.awt.event.ActionEvent
import java.util.Enumeration;
import dk.logiware.shark.scripting.SharkAppExtensionBase

public class SharkAppExtension extends SharkAppExtensionBase    {

   class MyAction extends AbstractAction {
      public void actionPerformed(ActionEvent e) {
         println "Hello"
      }
   }

   @Override
   public void init() {
      ActionHandler.getInstance().actions.put('MyAction', new MyAction());
      SharkSystem.getSystemMenu().addMenuItem(MenuConstants.FILE_MENU, 'Say Hello', 'MyAction', null)
   }

}
```

Code Snippets

Here is some code examples of common tasks.

Prompt for input

```
 import javax.swing.JOptionPane
..
println JOptionPane.showInputDialog("Enter box number")
```

returns “null” if the cancel button is pressed.

Error dialog

```
 import dk.logiware.shark.system.Dialogs
..
Dialogs.errorDialog("Show the error text here")
```

Using Vertical Lifts

Navigation

Menu: Administration -> Set Lift

Function

Set the height using the slider and press [apply] when ready. The table will now move to the requested height. Repeat until the requested working height is reached.

User Restricted Trays

It is possible to define trays in Automats with restricted access. Only users with the prober access rights are allowed to retrieve the tray. The restrictions works in all Shark functions, but it can still be possible to get access to the tray using the machines service panel with the prober access rights.

To control specific articles to go to the protected trays, make special location types in the protected trays and define the articles to use these locations types.

This feature is optional in some configurations.

Define Restricted Trays

To restrict access to a tray, go to the module configuration pane and click "Security Level" on.

Define Users with Access Rights

To get access to restricted trays, the user must have "Security Level" set to "1".

Set Lift Height in Automats

For automats equipped with variable picking tables, it is possible to set the height individual for each user. The height will be remembered until next login and ensure that the user always get the optimal working conditions. The height is defined for all automats in one setup.

Importing Files

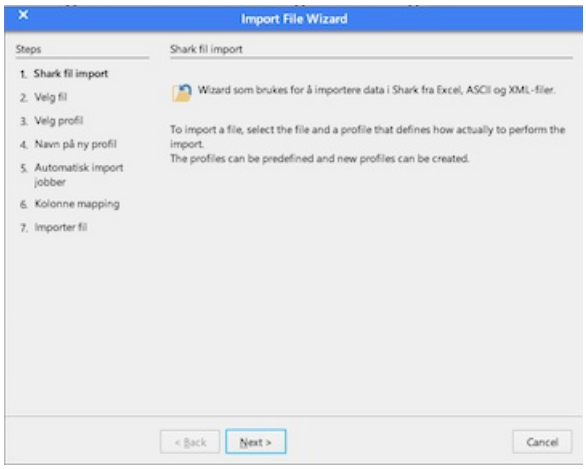
The File Importer can be used to manually import files. It can be customized, but as standard it can read a simple *Article Master Data* csv files, which can be stored from for example Excel and to import standard LogiSoft XML files.

Navigation

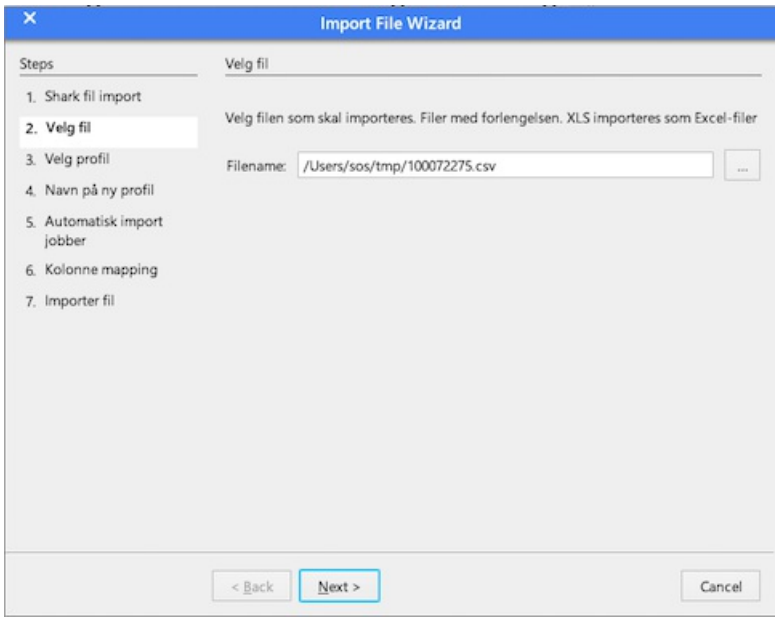
Open from the main menu Files -> Import.

Import File

Step 1 - Open the File Importer



Step 2 - Choose a file to import

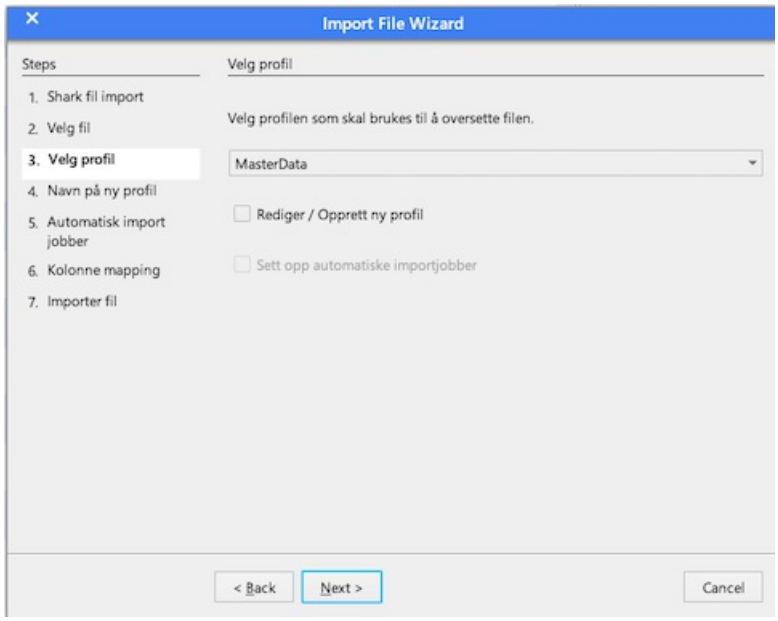


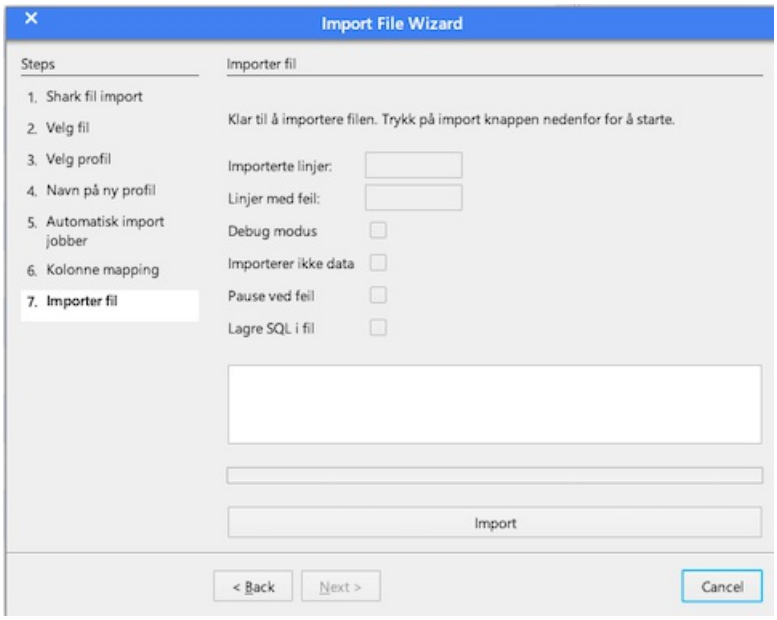
Step 3 - Choose the format of the file

Select from the list of *file mappings*.

There is one predefined mapping, this is Master Data with 2 columns defined:

1. Article Number
2. Article Description





Configure Your Own Importer

It is possible to configure your own importer. For a full configuration, it requires some knowledge of the database, but existing mappings can relative easy be modified.

Example

Example of a file mapping from a CSV file.

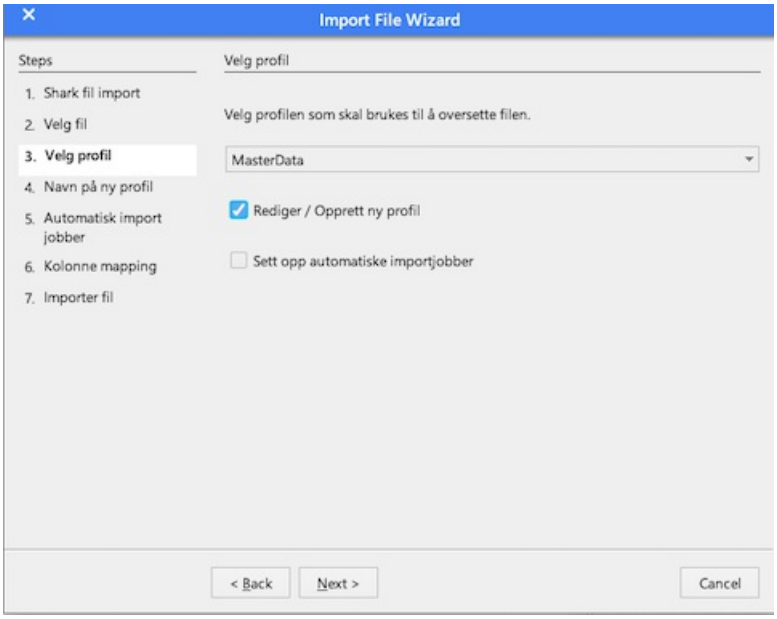
FileName	%Filename%
Gate	
Inspection	35
ItemCount	17
ItemName	
ItemNumber	11
LineNumber	4
Misc1	10
Misc10	22
Misc2	10
Misc3	5
Misc4	3
Misc5	2
Misc6	14
Misc7	4
Misc8	
Misc9	9
OrderNumber	1
OrderTypeID	=302
OurReference	

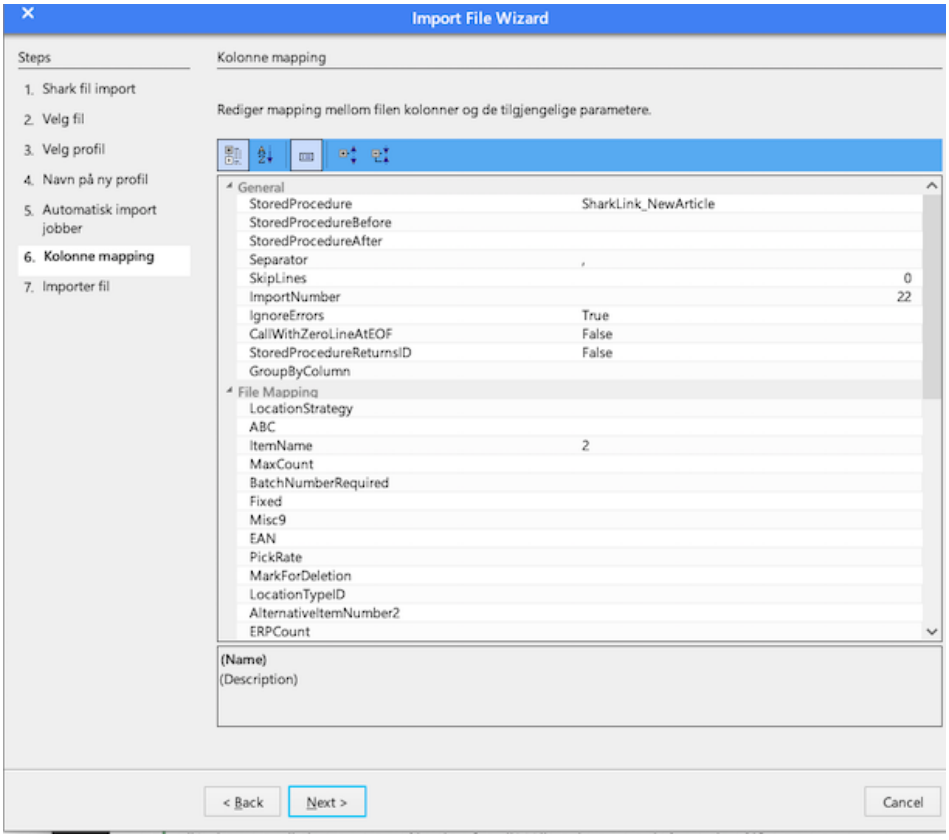
Here the parameter "FileName" is replaced by the current name of the imported file (%FileName%).

The "ItemCount" is read from column 17 of the CSV file (starting from 1).

"OrderTypeID" is set to a fixed value "302" and not read from the file.

Modify an existing Importer





Column Mapping

Possible values in the mapping table:

- Use the column index number (counted from 1)
- Special parameter with the format %...%
- Constants like : =

Parameter	Description
%LineNumber%	
%Id%	
%FileName%	The current file name.

LogiSoft PDA Client

The PDA client is a web client running in a standard HTML 5 compatible web browser. The client does not have the full functionality the PC provides and is mainly used for standard processes like picking, storing, adjusting, etc. but does for example not have features for system configuration, so although it has many similar functions as the PC client, it is not a replacement. It is also using screen layouts designed for smaller screens and to be used without a keyboard.

On-premise Installation

For installation running on a local server, the client is started from a browser using a URL to the server running LogiSoft. For example by: http://myhostname:8086 .

Cloud Installation

The url for a cloud installation, looks like this:

https:// .sharkwms.eu/gator_mobile/Gator_mobile.html

Choosing a language

The PDA client is running english as default. Other languages can be set by adding an extension to the url.

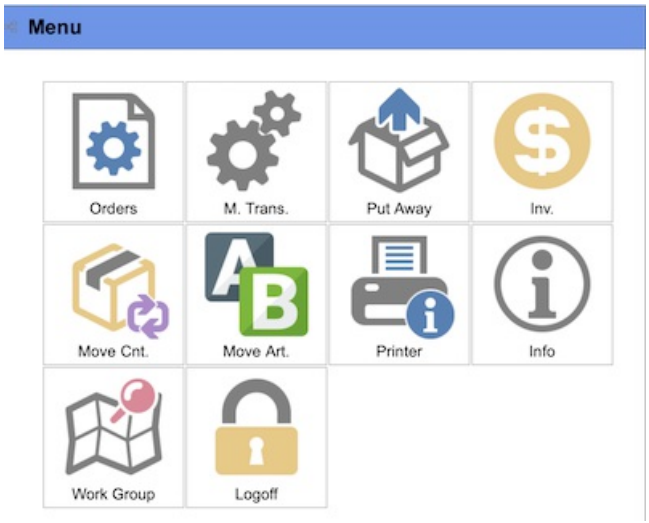
Language	Extension
Danish	?locale=da_DK
German	?locale=de_DE
Norway	?locale=no_NO
Swedish	?locale=sv_SE

Login

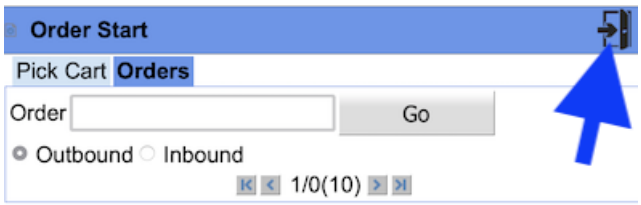
Before starting the client, login with an ordinary LogiSoft user account and password. Each user should only be logged in once, because jobs are attached to the user, not the PDA device. This allows a device to be replaced by another, in case for example the battery is flat.

Using the Menu

After login the main menu is displayed. It is a simple menu from where all the main functions can be selected.

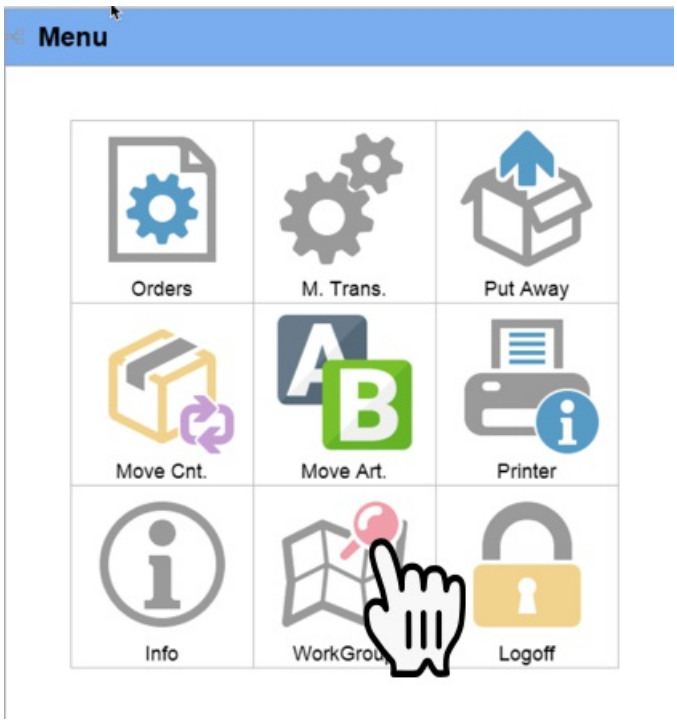


When a function is selected, return to the main menu by clicking the icon in the upper right corner. Do not use the backward button in the browser.



Choosing Work Group

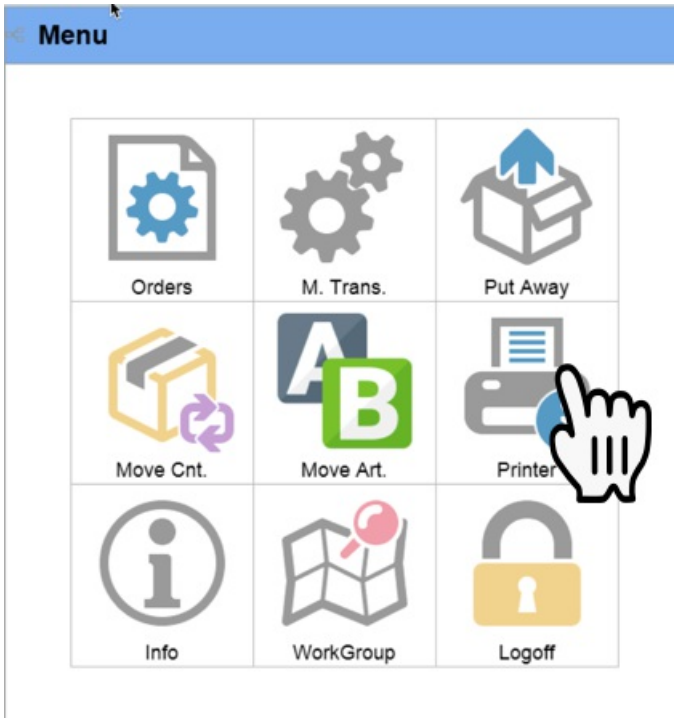
The user must select a Work Group, defining the area where he/she wants to work. The Work Group will be stored for future logins and used as the default. To select a work group, choose the "work group" menu from the main menu.



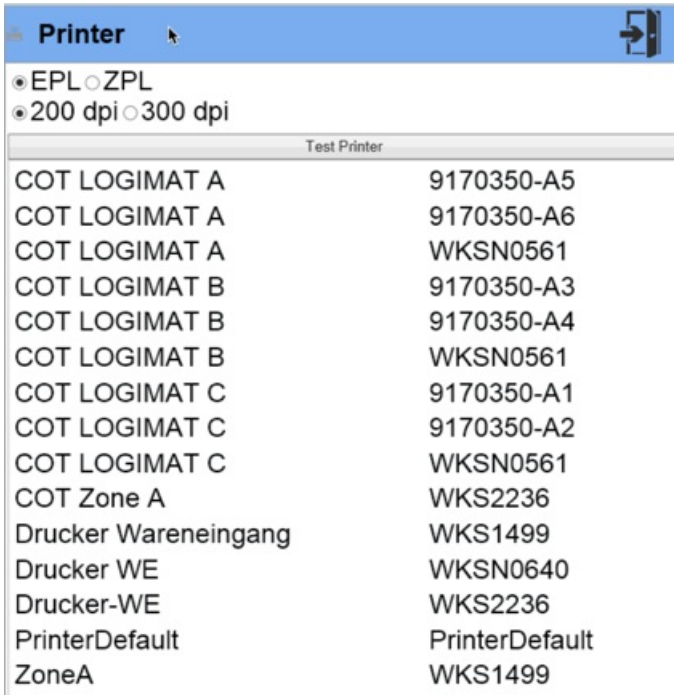
Printing

Printing is supported by the PDA client, but because it typical is a moveable device, it has not a fix printer, instead a printer must be selected as the current printer in use.

The printer selection menu is opened from the main menu.



From here click on a printer to be used for the coming print jobs. The first column is the printer name and the second column is the PC where the printer is defined.

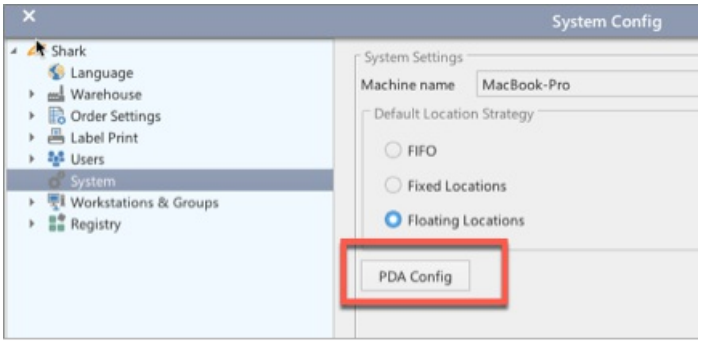


To configure the printing of labels, open the LogiSoft PC Client on the work station that is controlling the printer and make the configuration there. See the documentation for label printing.

Configuration

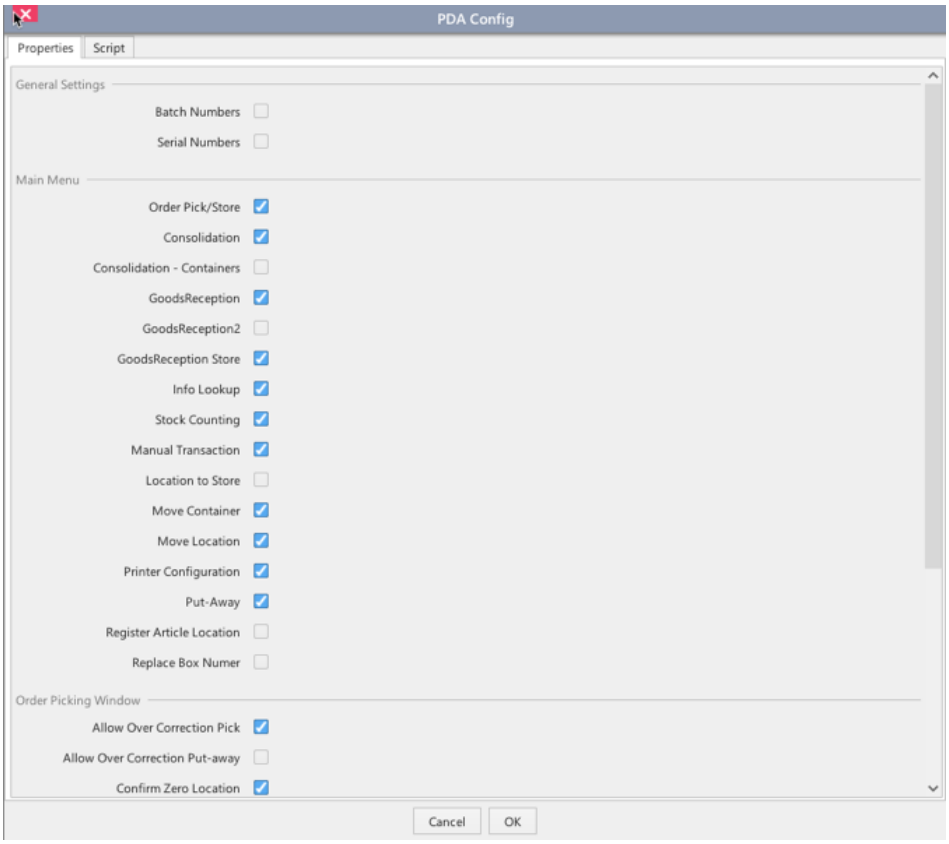
The PDA functionality can be configured to fit the requirements.

To make the interface as simple as possible, available menu items in the main menu are configurable. This is done from *System Configuration*.



Open the System Configuration and panel and find PDA Config.

The Configuration Panel is used to configure the behaviour of the PDA application.



The Main Menu section defines which menu points that will be available. To make the system as simple as use as possible, disable not needed menu entries.

Note: When the panel is closed the PDA Server application will be restarted. This means possible users using the PDAs, will experience a stop in the response for some seconds. To avoid this press [Cancel] if no changes have been done.

Functions

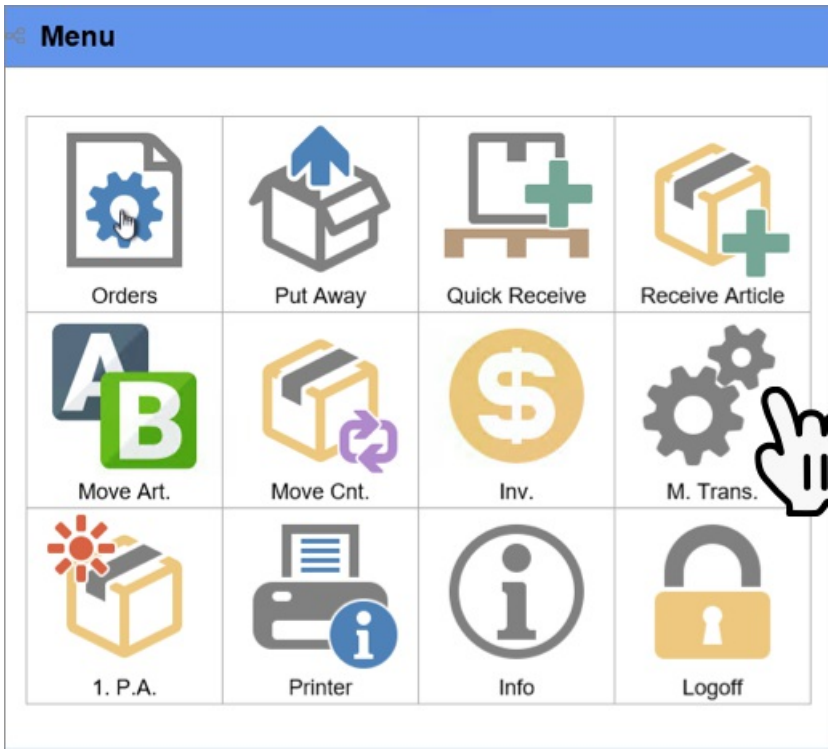
This section describes the available windows and their functionality.

Manual Transactions

Manual picking and putting is used for picking/putting-away separate items without use of orders. The function can, among other things, be used in combination with small installations where there is no interface to an ERP system, but is also useful for general ad-hoc picking and storing of items.

Navigation

From the PDA main menu, select "Manual Transactions".



Functions

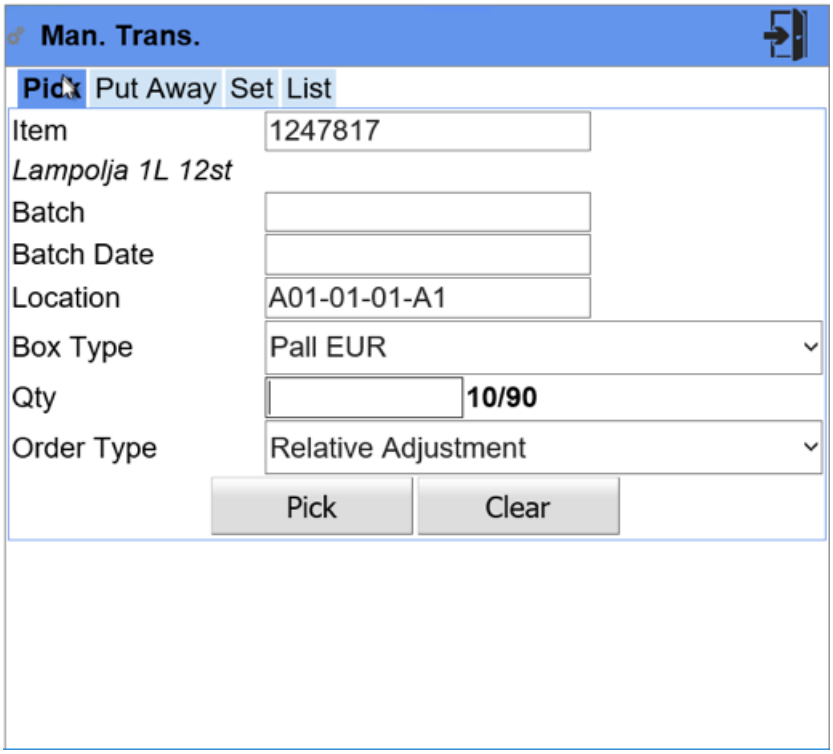
In the Manual Transactions Window, four tabs are shown.

- Pick - For picking goods
- Put-Away - For storing goods
- Set - To set the stock quantity on a specific location.
- List - A tab used to select, if more choices match the current selection, for example if an article number is entered, but this article is found on several locations.

Pick Tab

Used for:

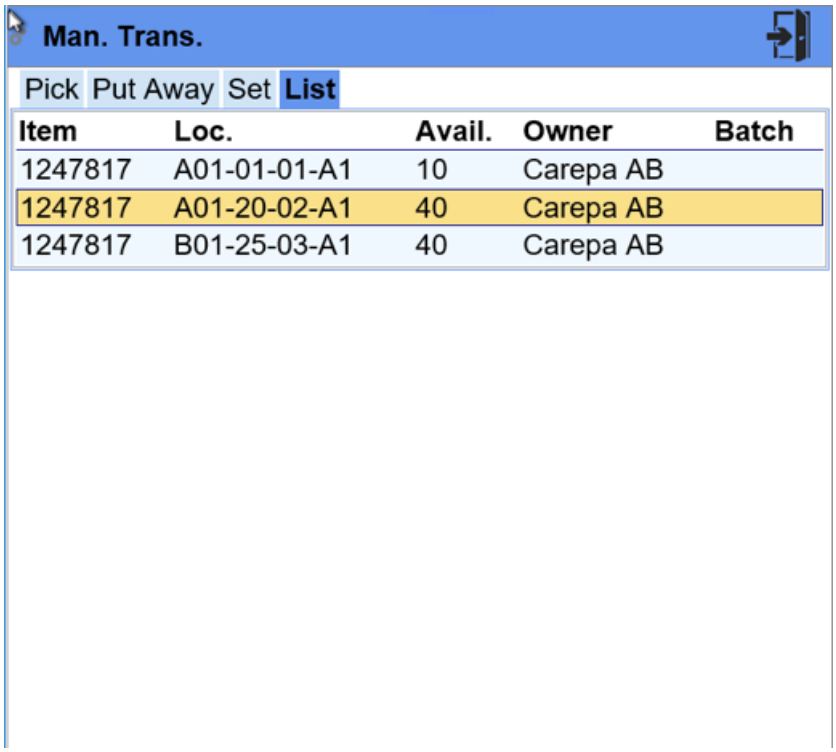
- Picking by article number
- Check the content of a location



Pick an article

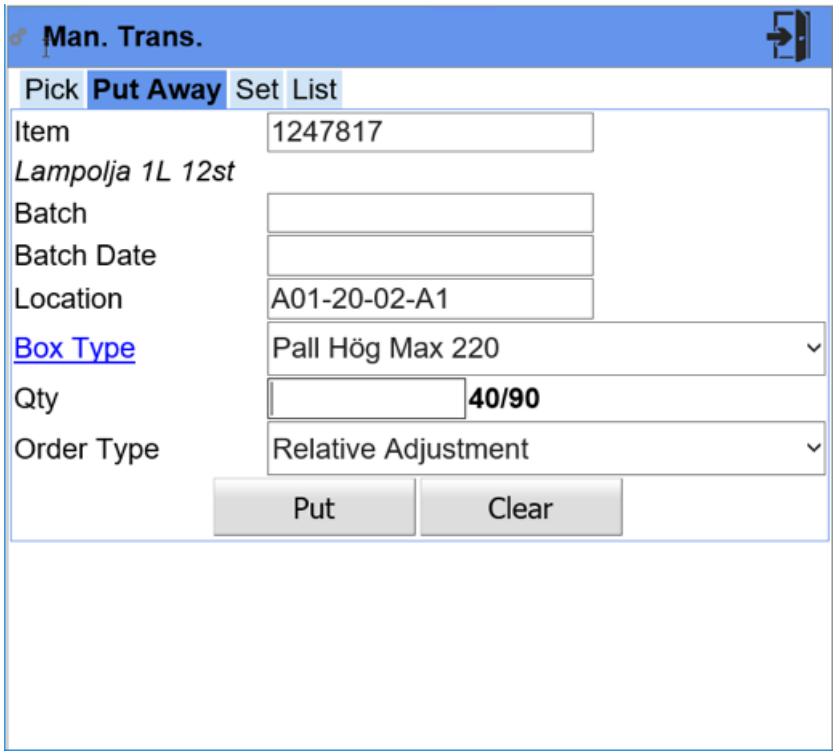
Pick an article from a location.

1. Enter or scan the article number in the Item field. Terminate by "return" if the text is entered by hand.
2. If the article is found one exact 1 location, the screen will be filled with the information, including location and stock on that location.
3. If the article has no location, the screen remain empty, except for the article description that will be displayed if available.
4. If multiple locations are found for the article, a selection list will be displayed from where the requested location can be selected.

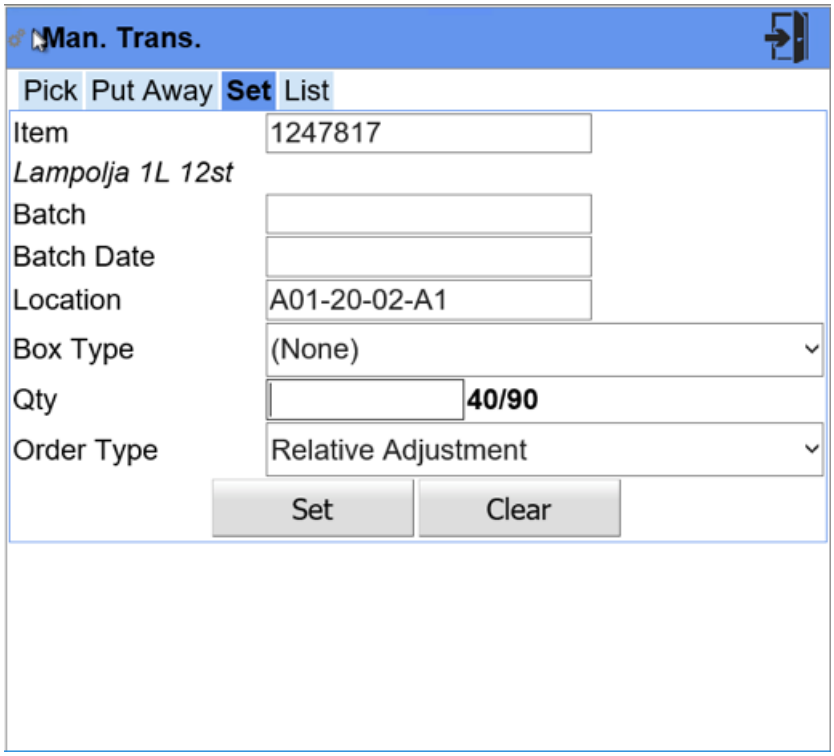


1. Go to the location and enter the quantity to pick.
2. Press [Pick] to confirm.

Store an Article



Adjusting stock



PDA Order Based Pick and Store

This function is used for picking or storing orders. The orders can be selected from a list or by entering (scanning) the order number. One or more orders can be processed as a batch. It is also possible to start a group of orders as a prepared *pick cart*.

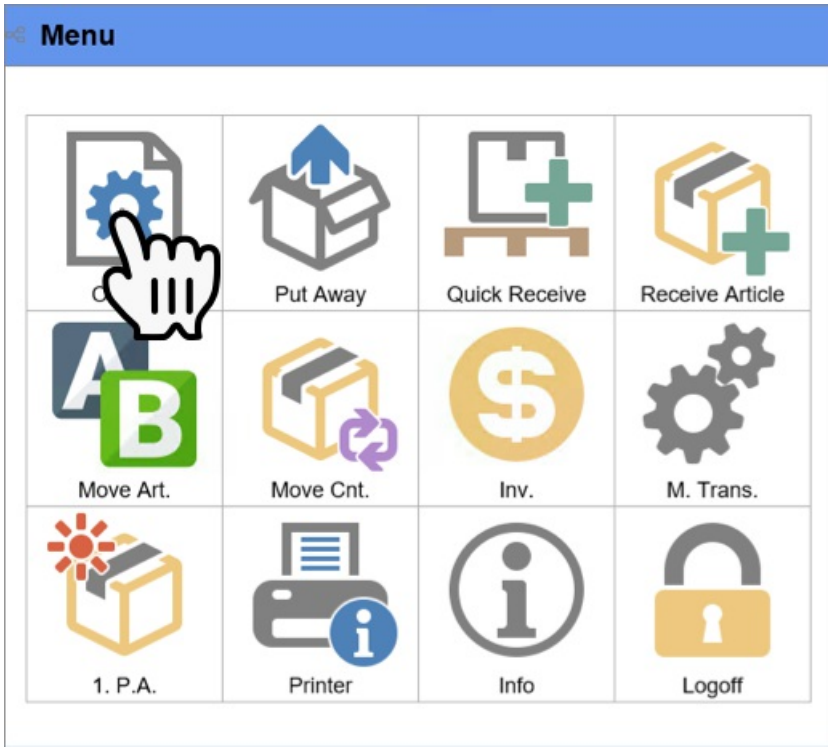
To start picking an order, the following criteria must be fulfilled:

- The order must be *released*. When the order is released, the stock is reserved and it is decided from which locations the pick will be done from.
- The operator must be logged into a workgroup, that includes some or all of the locations the order is going to be picked from.
- The order must not be activated with the same transactions on another terminal.

This functions allows multiple orders to be picked or stored at the same time.

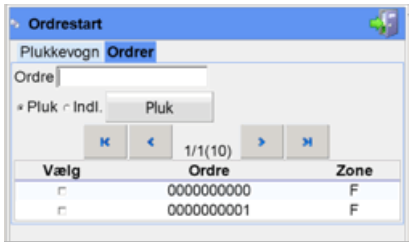
Pick orders by order numbers

Choose "Orders" from the main menu.

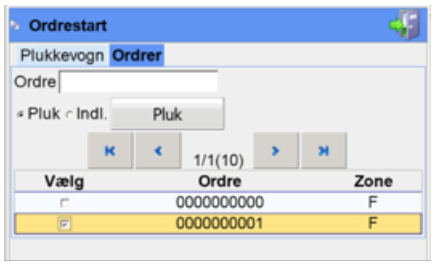


Pick an order by order number

1. Open the order window.



2. Choose the tab "Orders.



3. Choose orders to pick.

4. Start order picking.

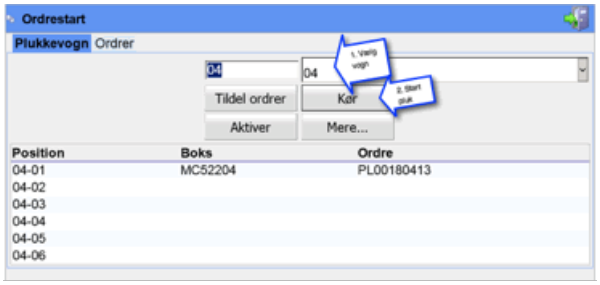
When all orders chosen, press the [Pick] button.

Start a prepared pick cart

Instead of selecting the orders manual. A pick part with pre-selected orders can be started. The preparation of the pick cart can be done from a PC client or from the PDA.

A pick cart can only be activated on one terminal at a time.

1. Choose the Pick Cart tab.



2. Choose the Pick Cart.

Choose the picking cart either by scanning a barcode on the pick cart or by selected the pick cart from a drop down list.

3. Start the Pick Cart.

Press [Run] to start the selected pick cart.

Picking Window

When the orders are started in one of the previous shown ways, the picking window is displayed.

1. Go to the pick location.

The window shows:

Qty: Quantity to pick.

Stock Qty (L/T/B): Shows quantity on the location (before the pick), total stock for the article (all locations).

Location: Location address from where to pick.

Box: If pick boxes are used, this is the box number to pick to.

Position: Position on the pick cart to where the goods are must be placed. For example "04-01" which means, position 01 on pick cart 04.

Order: Order Number

Article: Article number and description

Addional line: As standard customer number.

SCAN: Field used for confirmation.

2. Confirm.

The window mark fields that is required for confirmation, with "grey". This can for example be box number and article number. The field will change to yellow when the field has been confirmed. The order of confirmation is indifferent.

3. Next Pick.

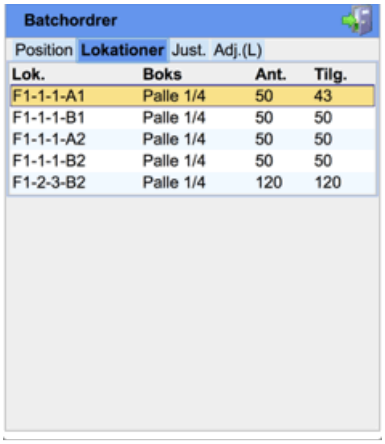
When all fields are confirmed, the window change to next line.

When all lines are picked, the window returns to the order selection screen.

Choose the pick location and check the stock

Choose the "location tab" to see other locations with available stock for the same article. It is possible to select a another location for the pick, if the available stock is sufficient.

1. Select the tab "locations".



1. Select the new location.

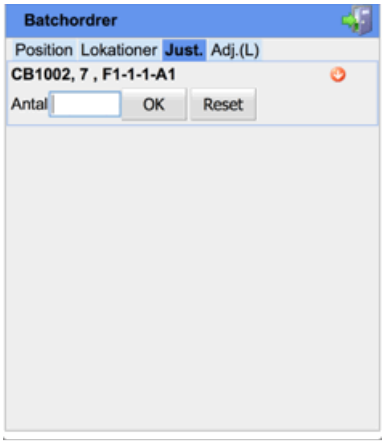
The pick will be moved to the new selected location.

3. Finish

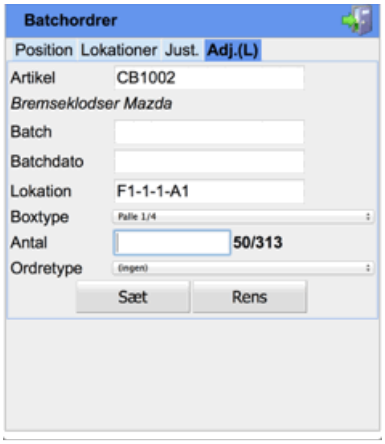
Press [Return]

Adjust the picked quantity

1. Choose the "Adjust" tab.



2. Enter the new quantity.



If the location barcode cannot be scanned

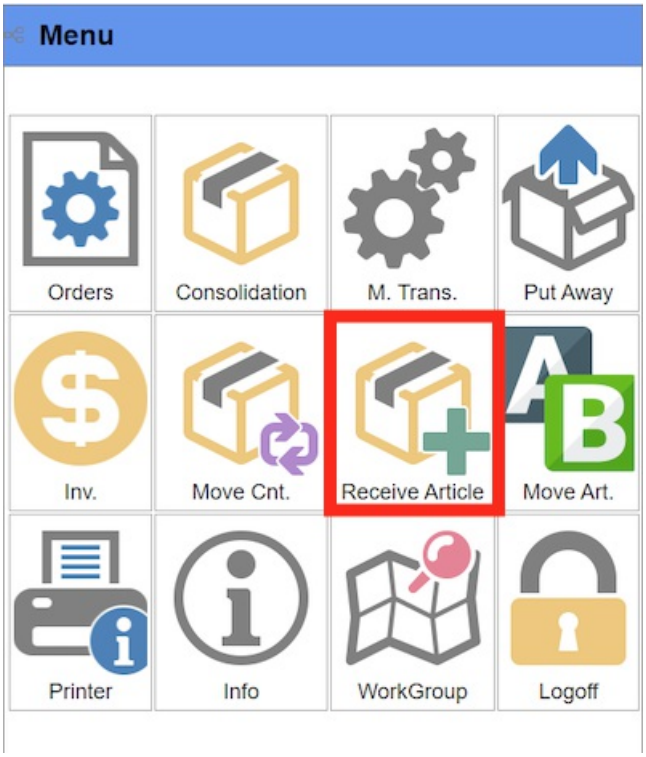
Enter or scan a barcode with the text "**SKIP**".

Goods Reception and Store

The PDA supports simple goods reception. This means you can receive goods on an inbound order, enter the received quantity and store it directly on the final storage location in an one-step process. It does not support

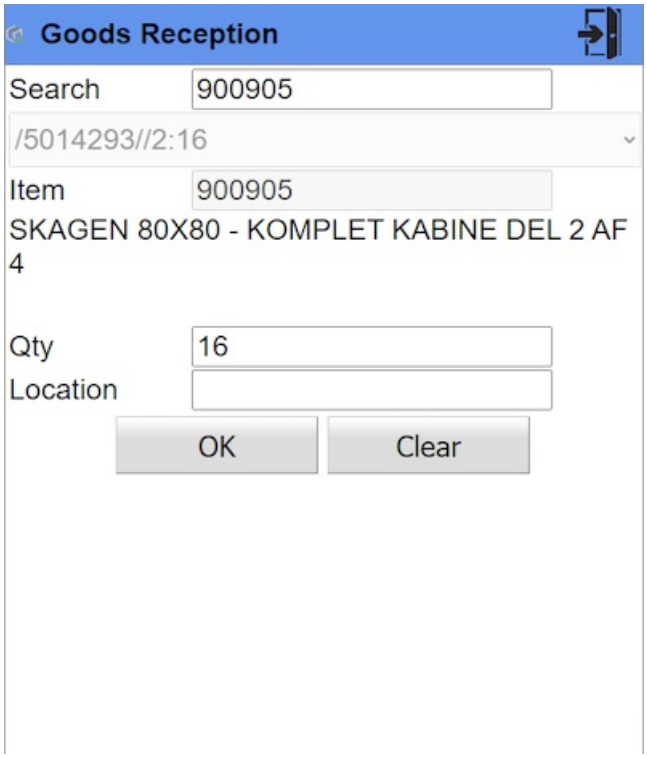
automatic location management, batch numbers, serial numbers, pallet id marking and similar more complex operations. On the other side is pretty simple to use.

To enable this panel in the user interface, "Goods Reception Store" must be selected for the PDA configuration.



Open the Goods Reception Window from here

How to Store the Goods



Step 1 - Scan the article number to receive

Step 2 - Select the order

If more than one inbound order matches the found article number, a drop down list will be displayed from where the requested order can be selected.

The list will show: *order number/line number in order/qty*

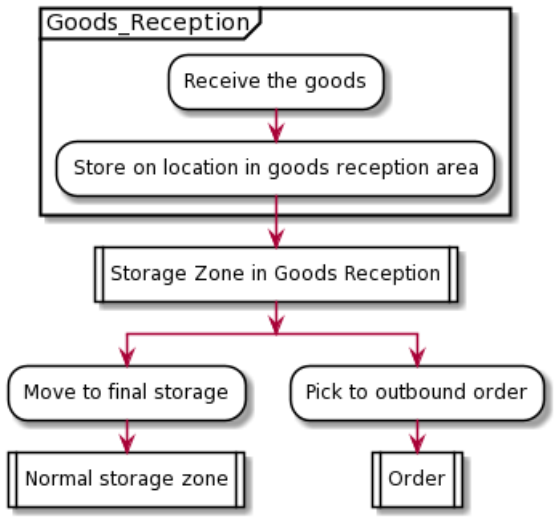
Step 3 - Enter the quantity

The default quantity is the expected value from the order. If less is received, the number can be changed.

Step 4 - Find a location

There is no location management, you have to find the location your self. Go to the requested location and confirm by scanning the location address.

Possible Processes

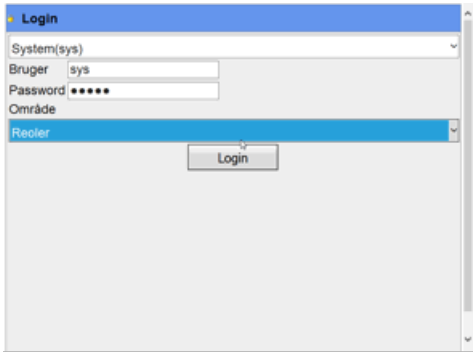


Example of the possible processes using this funcion

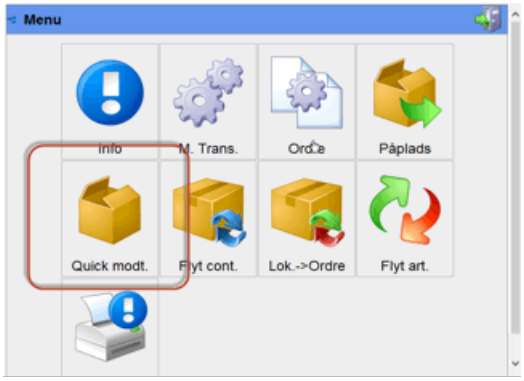
Simple Goods Reception

The easiest way to store a mixed pallet on a location on the warehouse floor or on a shelf in the warehouse, is to use the Quick Goods Reception function in the PDA client "Gator"

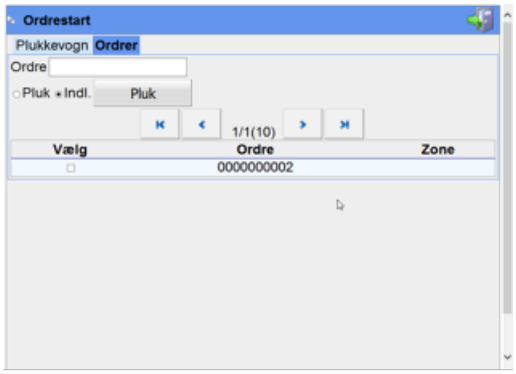
Step 1 - Log in to Gator

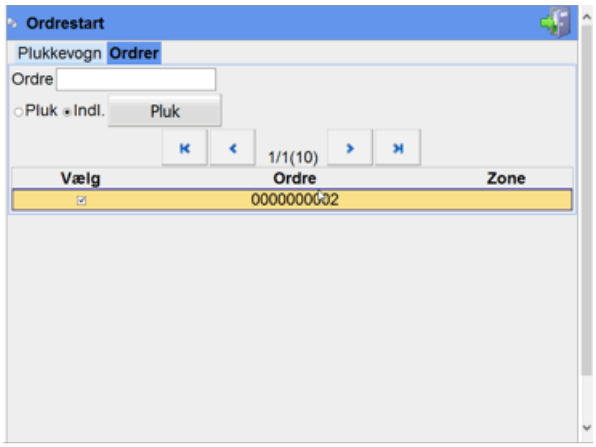


Step 2 - Select quick goods reception



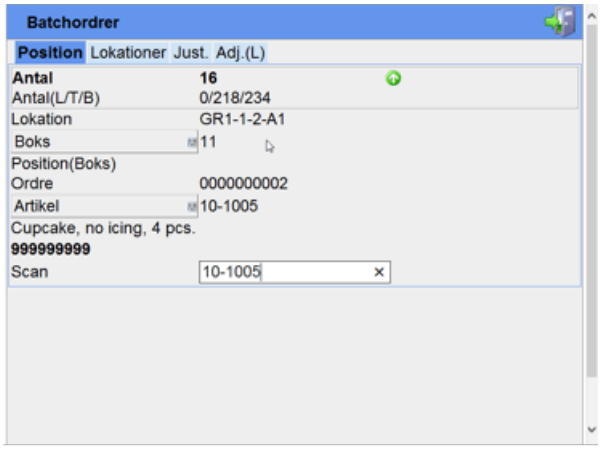
Step 3 - Select order





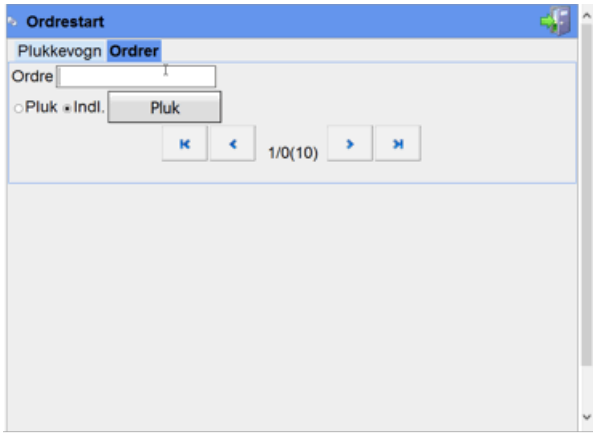
Step 4 - acknowledge

Each article number must be acknowledged, using the configured acknowledge settings. In this example, each article number must be scanned. (For brevity only one article number scan is shown)

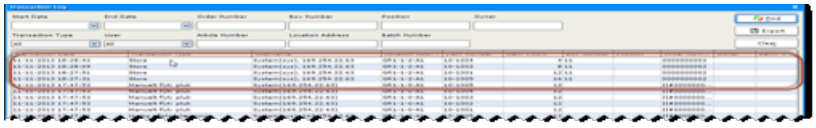


Step 5 - Go back

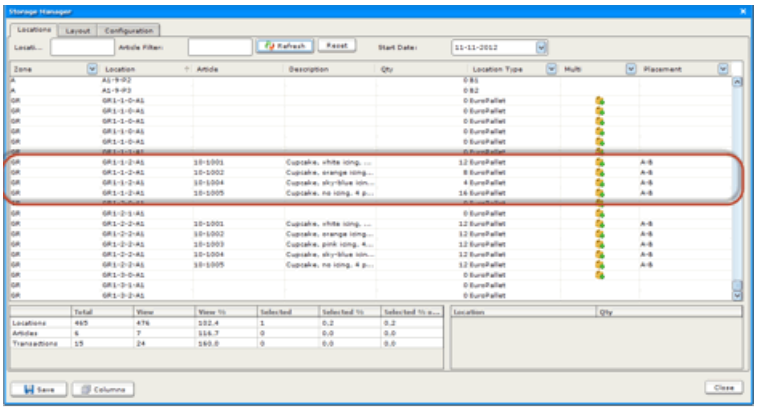
When all article numbers have been scanned, Gator goes back to the order selection screen.



After this, the transaction log will contain multiple put-aways to the same location, each with a different article number.



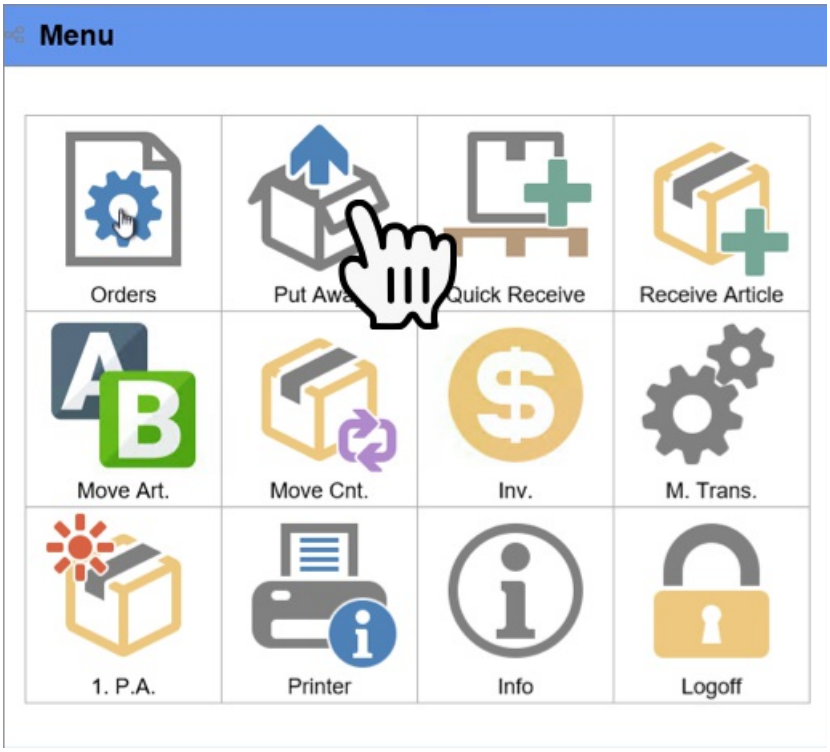
In storage manager it is apparent that the location is indeed a multi-location, and that the same location number has multiple article numbers attached.



Simple Put-Away

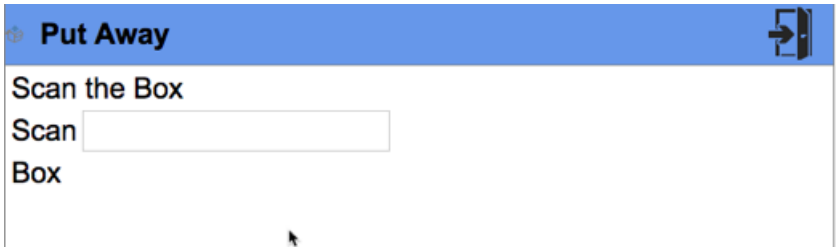
This function is used to storing goods marked by a box or pallet ID in the goods reception.

Navigation



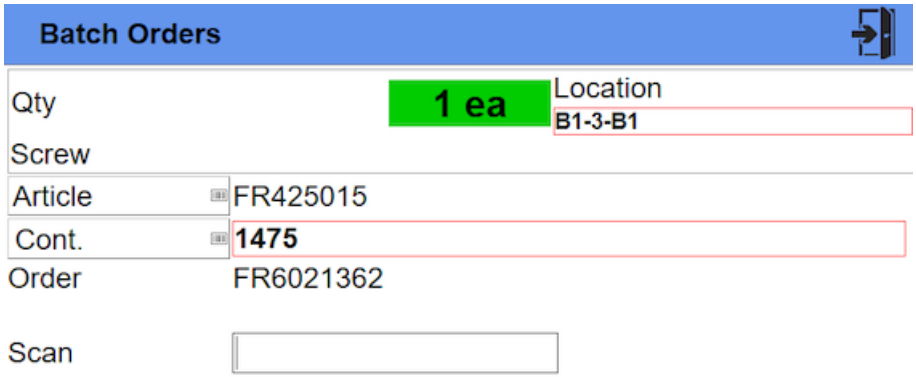
Simple Store

Scan the barcode of the Pallet or Box.



If a valid box or pallet exists, the display will jump directly to the put-away window. If it just shows the scanned barcode, it is because nothing is found.

Go to the displayed location and store the items on the location. Confirm by scanning location/Box ID or what is configured for configuration.



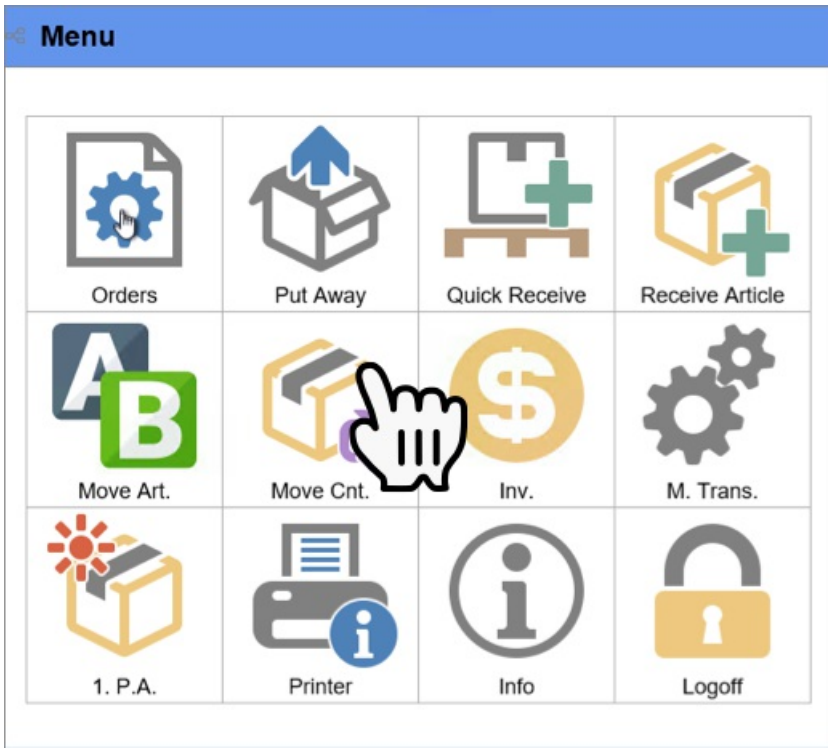
Store to an Alternative Location

Move Container

Function used for moving a container (box) from one position to another. Typical use is:

- Move a container from a pick cart to a position in the consolidation area.

Navigation

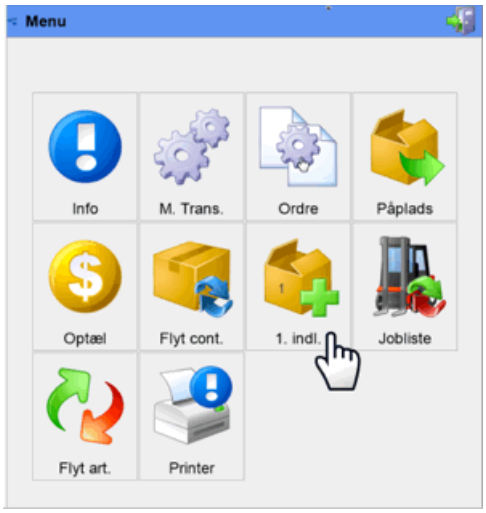


Functions

First time put-away

This is a simple function to store articles without orders. Mainly used for priming the stock for a warehouse with existing stock,.

Navigation



Moving Articles

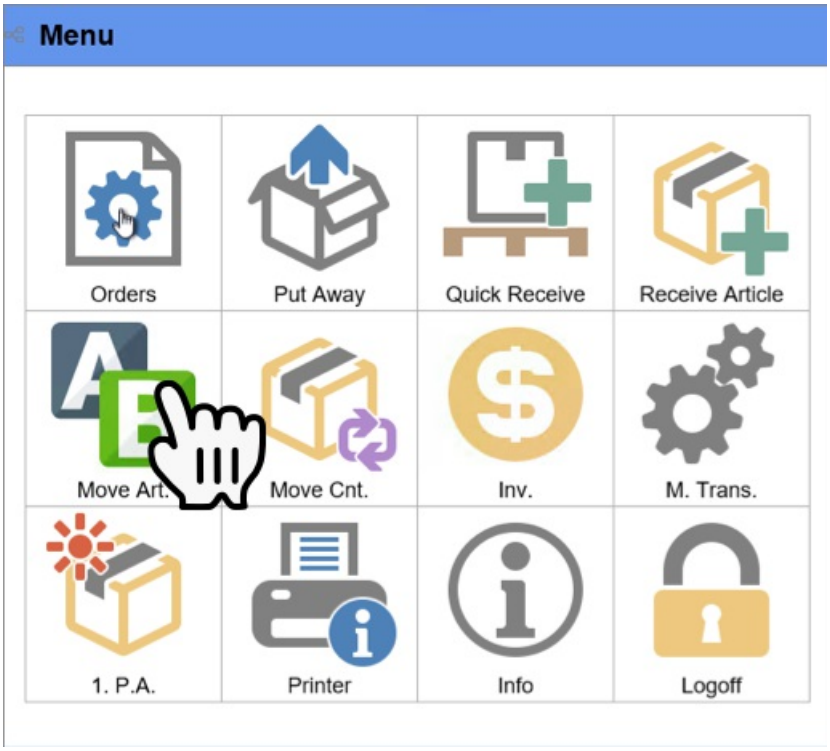
Simple function to move one article from one location to another without orders. Useful for simple replenishment or optimization of article placement.

The article is stored on the source location until the target location is confirmed, first then is the stock moved. This means that the movement must be done in one operation with the same device.

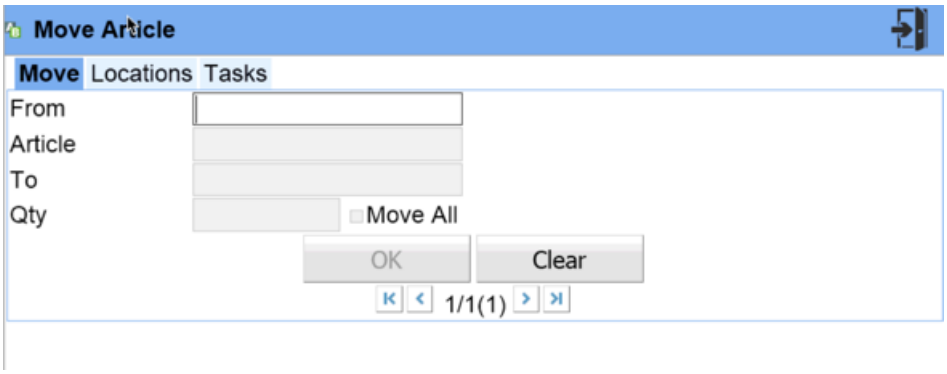
When an article is moved, transactions bound to the source location will be moved to the target location.

Navigation

The function is activated from the main menu by clicking “Move Article”.



Move an Article



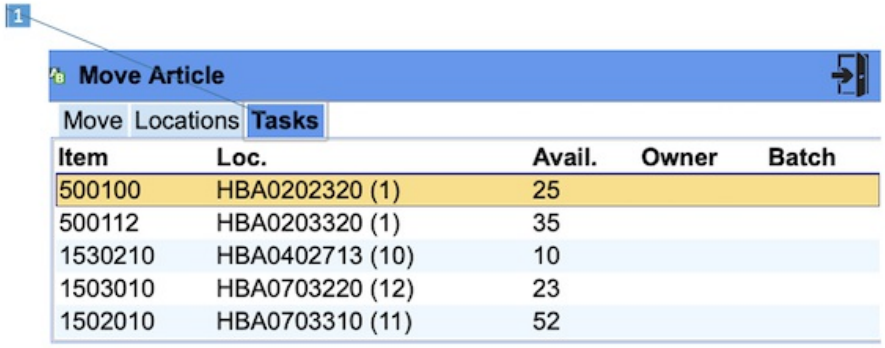
Move an article by scanning the "From" location and the "To" location. Enter the requested quantity or select [Move All] to move everything. When an article has been selected, the "Locations" tab will show other locations where the same article already is stored.

Task List

A task tab shows articles that should be moved from for example buffer to pick locations. This is a simple way of doing replenishment. This function will use the replenishment data defined for the article and in case the pick area is either below the minimum level or orders have been released without enough quantity in the pick area, a task will be displayed. The most important task will be at the top of the list.

As secondary priority tasks, articles that are placed in pick rate area that does not fit the articles pick rate, will make an entry in the list.

{% if site.development %} The task list is defined in the stored procedure ManualTransaction_GetItemsToMove. {% endif %}

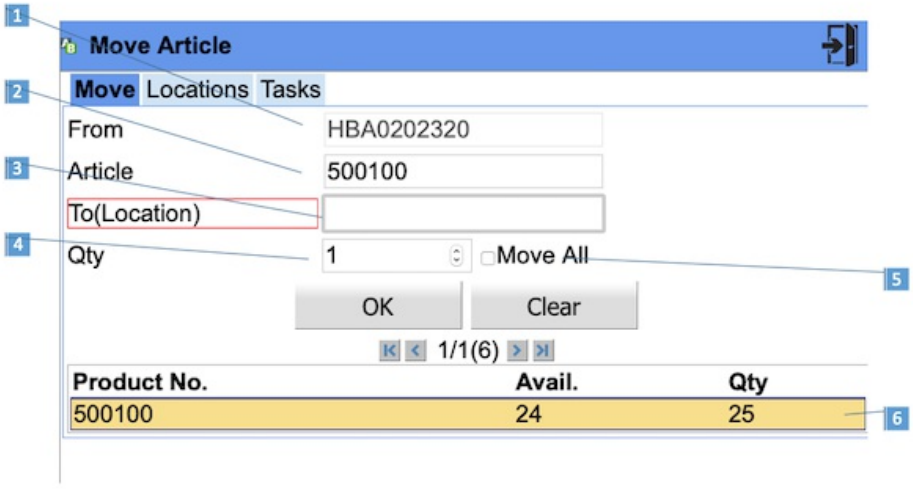


[1] Choose the task tab.

The "move article" tab suggest to move minimum 100 items from zone P82 to zone P11.

The next line shows that on location P12-1-36, there are an article with pick rate "A", but it is stored on a "AA" location and should be moved.

After a task has been selected by a click on the line, the "Move" tab will be opened and filled out with the selected task.



[1] From location, either filled by selecting a task or by scanning/entering a location address.

[2] Article to move.

[3] Move to location. Selected manually.

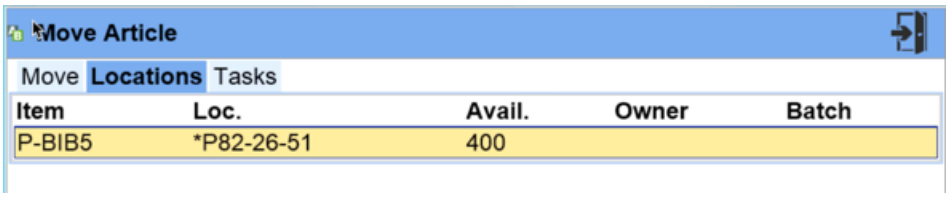
[4] Quantity to move.

[5] Choose "move all", to move all articles from the location.

[6] A list of items on the selected location. Click on one of them to choose an article to move.

View other Locations

To check where the article already is stored, open the "Locations" tab, thereby it is possible easily to fill an existing location.

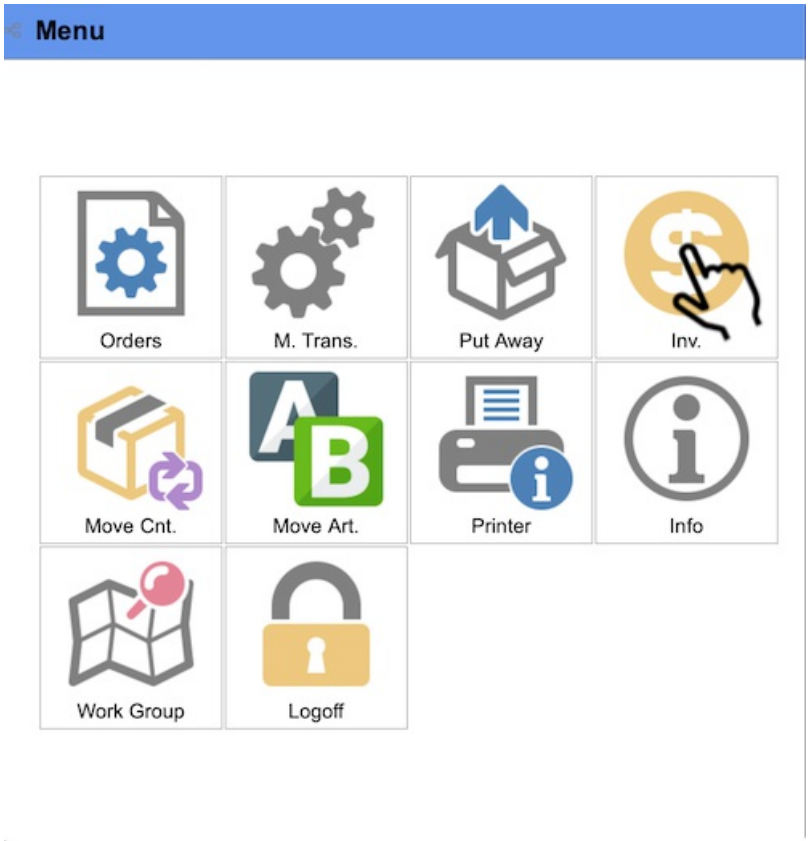


Stock Counting

The stock counting window support the LogiSoft functionality for continous inventorying. It requires that an inventory order already has been created. You can find more about creating inventory orders here.

Navigation

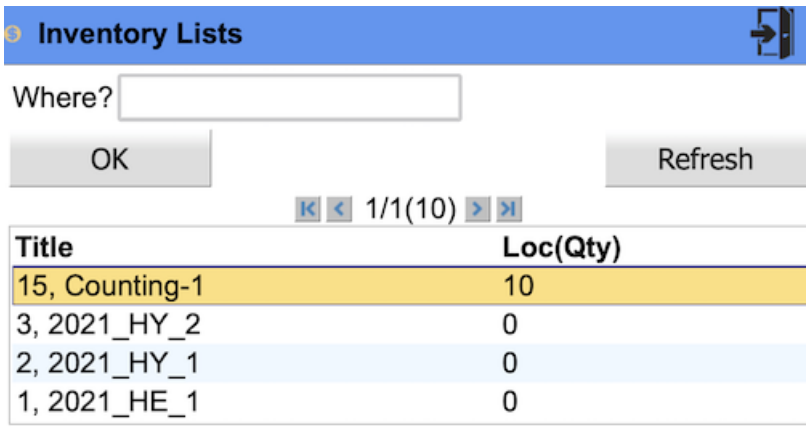
To open the counting window, select the inventory icon on the main menu:



Start counting

To start a counting, select an already created order from the displayed list.

If no orders are displayed, it is probably no orders have been created or are not in the "counting state".

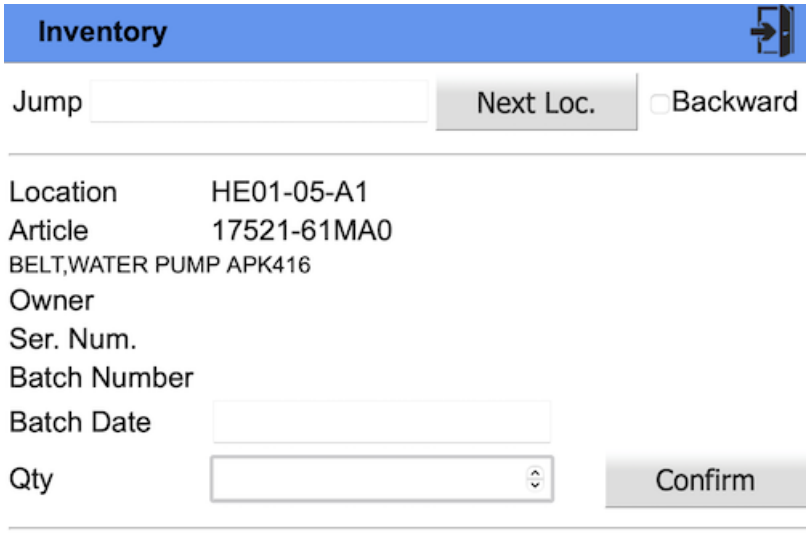


The "Where" field can be used to scan a location barcode, the counting will then start from the first location to count, after the selected location.

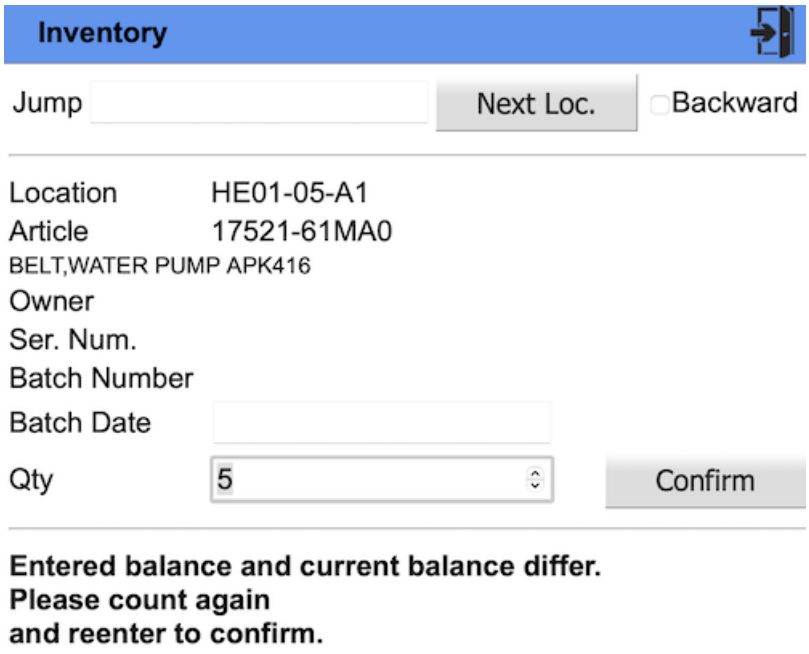
When selected, press "OK" to start.

The display will now snow the location to count. Now:

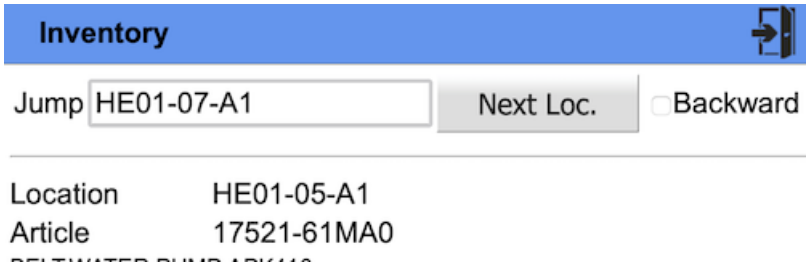
1. Go to the location.
2. Count the items.
3. Enter the quantity.
4. Press "OK".



If the entered quantity matches what is expected, the window will snow the next location, if the counted quantity differs from what is expected, the user is asked to confirm by entering and possible re-count the number again:



If it for some reason not is convenient to count locations in the default order, it is possible to jump to another location. Just scan or enter another location address in the "Jump" field and the counting will continue from the first succeeding location after the scanned location. This is for example useful, if multiple persons are counting in the same area.

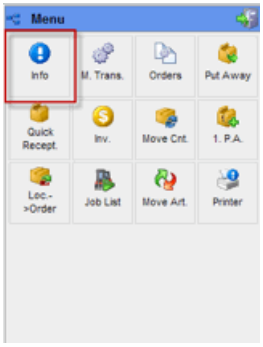


Information

Information window.

Navigation

From the main menu press [Info].



Function

The page shows information about:

- Who is the current user.
- A *SessionsID,* an internal number used for debugging possible problems.
- The unit name of the current PDA.
- The current work group for the current PDA.
- Name of the current database.
- Name of the printer used for printing labels.
- Software version number.
- The size of the screen in pixels.

Quick Receive of Orders

Use this function to receive a complete order and scan it to a location. This can be useful as a quick way to receive goods and make the stock available for picking immediately without unpacking the order. Typical the location used for storage is a temporary location in the goods reception area and the order will later be unpacked and moved to the final location.

The obvious disadvantage is that the order is not checked, so there could be a mismatch between the registers stock and the actually received quantity.

Navigation

Choose quick receive from the main menu.

Functionality

It is always best to receive an order line-by-line and preparing to be stored on the correct location, but if a huge amount of orders are received in a short period, it can be difficult to handle and this can be solution to register the goods are in house.

Select or scan a purchase order. If the order is found, the operator will now be prompted for a location to store the whole order. The location will be typical be in the goods reception area.

The goods are now available for picking and can then later be moved to the final location.

The Quick Receive order window.

> Note that it is not possible to handle partly deliveries, all lines and quantities are expected to be received at once.

The locations used for storing the goods, must be marked as multi-article locations.

This function works together with the "Location to Put-Away Order" window. Using this function the order can later be received the traditional way.